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Production Decline has Stabilizing Influence on Market

Prospects now that output will remain under 2,500,000 barrels through winter. Seminole operations slacking as decline becomes positive

By KENT RIDLEY

THE most substantial drop in production recorded in several weeks which brings the total down to the level obtaining in the middle of June, is the most important market development to record for the week. The feeling now prevails that Seminole is definitely on a decline and that power of the proration umpire there to limit the output to 450,000 barrels daily will not again be needed. West Texas is now looked upon as the sole menace to the production situation, and this area is pretty well under control for the time being.

Seasonal falling off in gasoline consumption is having its effect upon the market for that commodity more in retail than in refinery circles, with marketers in several centers butchering their markets through price wars. Refinery prices have not changed from a week ago, with the demand for burning oils continuing to offset in part the lessened movement of gasoline.

American Petroleum Institute estimates for the week show that production took a decided turn downward for the period ending October 15, when the average was given at 2,494,350 barrels a loss of 32,450 barrels under the previous report. Oklahoma and Texas registered the largest decreases, while small increases were reported from Arkansas, Wyoming and Eastern States.

Production Estimates

Oklahoma s average was 790,200 barrels daily as against 807,000 for the week before, a decrease of 16,800 barrels. In the Seminole area, Little River increased 2000 barrels, while each of the four other fields declined as follows: Seminole 1200 barrels, Bowlegs 5750 barrels, Searight 900 barrels, and Earlsboro 6200 barrels, a combined decrease of 14,050 barrels for those four fields.

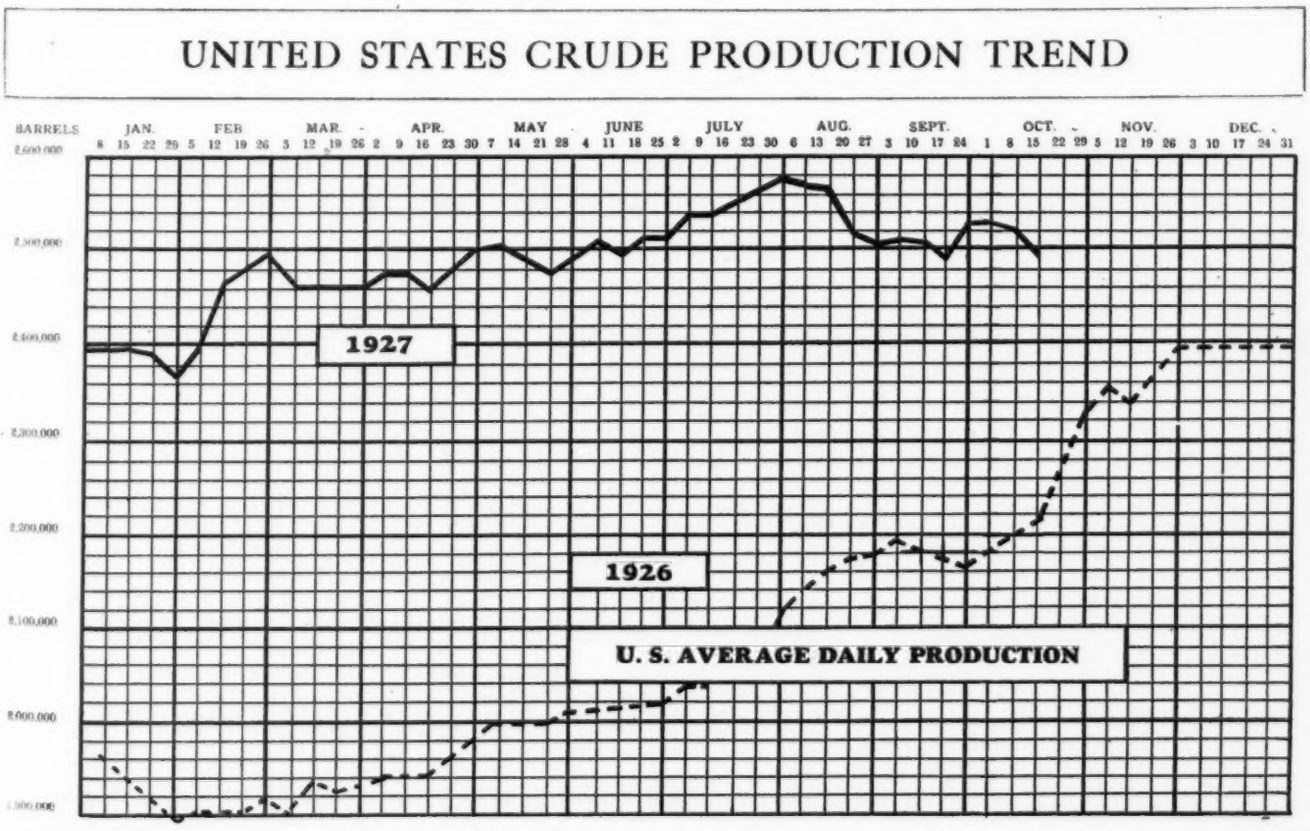
In Texas the daily average was 617,000 barrels, a decrease of 14,550 barrels. Every section of the State experienced a decrease in the daily yield, but the most marked drops were in West Texas and the Gulf Coast, where the averages fell 5200 and 5000 barrels respectively.

California's daily average was 629,200, a decrease of 3800 barrels. That of Kansas was 104,750, a decrease of 50 barrels; of Arkansas 101,050 barrels, an increase of 850 barrels; Eastern States 113,000, increase 1000. of the Rocky Mountain States combined 72,350, increase 250 barrels, and of Louisiana 66,800 barrels, an increase of 650 barrels.

During the week ending October 14 there were 208 permits issued for new tests, approximately the same number as during the previous week, when 175 permits were issued, exclusive of the Mountain States, which reported a total of 24 for October 14. Oklahoma showed the largest increase, granting 48 as against 28 for the preceding week. California and Kansas issued 16 and eight, respectively, the same number in each case as during the previous week. Louisiana issued 16, as against eight; Arkansas three, a decrease of three, and Texas 93, a decrease of 16.

Field Operations

Field operations in the United States



DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
CALIFORNIA—								
Seal Beach	222	293,452	1,322	112	66,000	589	30	50
OKLAHOMA—								
Seminole	970	1,340,785	1,371	910	443,097	486	26	324

resulted in 86 more completions and approximately 30,000 barrels more new production during the past week than during the previous week. There was also a larger percentage of producers among the completions, the total of 428 tests finished, including 272 wells, yielding a combined initial of 95,264 barrels; whereas during the previous week out of 342 completions there were 166 producers of a combined initial production of 65,735 barrels.

The largest increase was registered in Texas, due to the completion of several large wells in the western section, which furnished approximately 32,000 of the 42,000 barrels of new production of the State. During the previous week the initial production of all new wells in Texas was 24,460 barrels.

California and Oklahoma also furnished more new wells and more new production than during the previous week. In California 22 new producers yielded 12,695 barrels initial, while during the previous week 13 wells furnished 9225 barrels. In Oklahoma 39 wells yielded 34,178 barrels, as compared with 37 wells of 29,126 barrels initial during the preceding week.

Louisiana, on the other hand, experienced a slump in activity, with five new wells out of 11 completions yielding only 310 barrels. There were six wells the week before among 19 completions, the combined initial for the week being 1715 barrels.

California

In California, the deep sands in the Long Beach (Signal Hill) field are attracting considerable attention. Deeper drilling in the main producing sand has disclosed a saturated condition of much promise. It seems that the Los Angeles Basin constantly has some area to worry about. The Seal Beach field seems to have passed the most critical stage. Now the Long Beach area again steps to the front with a menacing look. It is far too early to predict the ultimate outcome of the deepening campaign, but there is sufficient evidence to insure a substantial increase in production.

The new area opened west of the Goleta field by the Barnsdall interests is a bona fide discovery and the first well has proven itself a commercial producer. It is not safe to estimate the value of the new field, due to puzzling water conditions. It is fairly safe to say, however, that the area will cause no serious upsets.

Movements of fuel oil are entirely satisfactory in the State, with exports holding steady and domestic consumption gradually increasing. Certain foreign countries are not taking as much of the commodity as a few months ago, but others are importing a still greater amount.

Gasoline consumption in California, which is unusually high for this season of the year, is practically unchanged from last week's figure. Perfect weather has been a big factor in maintaining such a large consumption.

California production showed a good decrease during the past week, confirming the prediction of last week that a gradual decline should be expected. Conditions in the Seal Beach and Long Beach fields probably will be the determining factors during the next few months.

Mid-Continent

Fear of Seminole as a continued market disturber has given way to that of what West Texas holds for the future, even among Mid-Continent officials. While no material change for the better transpired with the Seminole overproduction situation during the past week, the field's general weakness is plainly pictured in the continued decline of operations there. The competitive element of Pecos County crude with the grade Seminole is yielding, as well as most other sections of Oklahoma and Kansas, is the outstanding disturbing factor over the Mid-Continent now.

Mid-Continent operators can see no lower daily production in the United States during the coming six months than 2,500,000 barrels, and estimates on consumption run around 2,200,000 barrels, leaving them to face the fact that some 300,000 barrels of oil must go to storage per day for the next half year.

As far as activity is concerned, it continues on the decline in Kansas and Oklahoma, operations in the former dropping 12 during the week and 26 in the latter State. That the boom has passed at Seminole is evidenced by the fact that more than 300 rigs are stacked in the five fields, wanting for wells to drill. The rotary business is rapidly coming to a close there inasmuch as this type of work is only used on the first 3700 to 3800 feet generally. There are only approximately 100 rotary rigs in operation there now, with prospects of few starting.

Gasoline, as a result of slowing down of business with less motoring and as a result—price wars—has gone as low as 11 cents retail at many stations. A general cut of 2 cents, bringing station prices to 16 cents, went into effect in several cities last week, and rumors of still lower retail prices are prevalent. Refinery quotations showed no marked change during the week in the Mid-Continent, but a general weakness is in evidence. The curtailment of from 10 to 25 per cent crude runs started two weeks ago by some refineries is being followed up pretty well through the entire Mid-Continent district.

Tulsa.—The technical subcommittee of the American Petroleum Institute conservation program met in Ponca City October 17 to compile data for the meeting of the committee of seven on October 19. The Ponca City meeting was fixed by the conservation committee when in session at Colorado Springs on September 12.

E. W. Clark, president of the Institute, and W. R. Boyd, assistant secretary, were present this week to meet with the committee of seven in compiling facts to be submitted to the American Petroleum Institute board of directors for the purpose of seeking legislation on the conservation of oil and gas.

People's League Wants "Standard" Prosecuted

Washington. — Prosecution of the Standard Oil companies for violation of the Sherman and Clayton anti-trust acts has been asked of Attorney General Sargent by the People's Reconstruction League.

In a request to the Attorney General, which the league announced was made October 15, the legality of the efforts of the Secretary of the Interior to effect a further combinatioin of oil interests was challenged, and the Standard companies were alleged to be "in complete control" of such interests.

The league referred to the report made in 1923 by the Senate committee on manufactures following an investigation on the "high cost of gasoline and other petroleum products," in which it was stated: "The dominating fact in the oil industry today is its complete control by the Standard companies. Standard Oil today fixes the price which the producer of crude oil receives at the well, the price which the refiner receives for his gasoline and kerosene, as well as the retail price paid by the consumer."

"This is clearly in violation of both the Sherman and the Clayton anti-trust laws," the Attorney General was told, "and on behalf of the People's Reconstruction League, I respectfully ask that you immediately proceed against the Standard Oil Companies and that you refuse to aid or abet any other branch of the government in its efforts to keep up the price of gasoline by sanctioning any further combination of oil interests. The use of pressure in extracting oil, as well as the large production, should result in lower prices for gasoline. Lower prices would increase consumption."

Conservation Through Legislative Control Not Possible

Suggested limitation of drilling would only temporarily postpone exhaustion of supply, if there is foundation for present hysteria

By F. C. PROCTOR,
An Attorney of Houston, Former General Counsel of the Gulf Companies

OLD-TIMERS in the oil industry have told me that ever since Colonel Drake in 1859 drilled the first oil well 69 feet deep, there have been recurrent alarms that our petroleum resources would soon be exhausted. Certainly there have been these during the twenty-odd years that I have been connected with this industry. Particularly do I recall, in about 1914, an impassioned prophecy from a very strong character, that all of the oil would be gone in 10 years. This and many other like prophecies are somewhat overdue. Recently this alarm on the part of the public has recurred in an acute form, following the report of the Federal Oil Conservation Board and many newspaper suggestions what to do about this matter. With these latter I am not in accord. Answer to this question should be controlled by reason, not by the hysteria of the public, nor by the self-interest of the oil companies.

Houston, Texas, October 15, 1927.

Mr. E. W. Clark,
President, American Petroleum Institute,
250 Park Avenue,
New York City, New York.

Dear Mr. Clark:

For many years I was general counsel of one of the larger oil concerns. Although I retired from this work several years ago, my interest in the oil industry has not abated. I have endeavored to follow its fortunes and to understand its problems.

At different times recently I have been requested by a number of my friends in the Industry to attempt an analysis of the difficult situation that now confronts it, to suggest a course to be pursued, and to make these public. Among the gentlemen making such requests were Mr. Teagle, Mr. W. L. Mellon, Mr. Beaty, Mr. Davison, Mr. Farish and Mr. Leovy. Although I feared they paid me too generous a compliment, yet I felt I should comply with their requests, and have written the attached paper.

I have submitted to these gentlemen the thoughts of this paper, though not in the exact form in which they are presented. I understand that they all concur in the main in my views, but this does not mean that any of them acquiesces in all that I have said.

It seems to me the fitting way to give publicity to this paper is to send it to you as President of the Association that is representative of the entire Industry, and then to mail it to members of the latter, and to some others, who may be interested.

With assurances of my esteem, I am
Sincerely yours,
F. C. PROCTOR.

It would be unfair for the reader to assume that one who has been connected with the oil industry is so prejudiced in opinion that he can not consider this problem dispassionately, and therefore is not entitled to a hearing. To the contrary, his interest in the industry should make him see that if there be any need to conserve our petroleum, this is far more important to the industry than it is to the public. For if the petroleum should be exhausted, the public would still get its oils from the shales, coal and lignite, probably at a somewhat higher, but not unreasonable price; but a large part of the investments of the industry—appraised at from nine to eleven billions of dollars—would be of little value. The problem is of great concern to the public, but of greater concern to the industry.

At this time, when the public's fear is greatest that it will soon lack for oil, the industry is staggering under the burden of taking care of too much oil, and fears there is more to come. Yet I think it is not strange that from these wholly contradictory fears, by the public that there will be too little oil, by the industry that there will be too much, there should arise an agitation for control of oil production by law. For this is the Great American Fetish—this belief that government through laws can afford relief for every ill, economic or moral. Our history is replete with proofs that restraint by law, once begun, always increases. For example, prohibitioin, the careers of the Interstate Commerce Commission, and of all other public boards and utility commissions. This is logical in the worshippers of this fetish. Failing to recognize that legal restraints only muddle up temporarily, but never control permanently, the workings of economic laws, they reason that the failure to accomplish their purpose is because the dose was too mild, and demand that it be administered more and more drastically.

All will agree that the conditions in the different oil fields are so dissimilar that there could not be prescribed by statute the prohibitions that would restrict production of oil, so that by mere obedience to the statute that result would follow. This could be accomplished, if at all, only by vesting in some commission, or other tribunal, broad powers of wells, as in its judgment conditions may require to secure that result.

Objections to Bureaus

I shall not discuss the many objections to government by commissions or bureaus. They are known to all intelligent men. I content myself with presenting two objections that are peculiar to this problem: the one convincing me that any scheme of restraint of production of oil by law is wholly unworkable under our sytsem of government; the other that, if workable, the result attained would be no protection to the public, if there be any danger that our petroleum resources will soon be exhausted.

Control of production of oil through commissions is unworkable under our system of government.

An initial obstacle is that there can not be any one commission to control the production of oil in all the states in which it is produced. Congress cannot create any federal commission to do so. This is because of the careful limitations in the constitution upon the powers of the federal government. The drilling and operating of oil wells within Oklahoma is an intrastate activity, subject to the control of that State alone, and wholly without the scope of any power of the federal government. I feel safe in saying that there has never been any opinion of any court that can be cited to support the existence of that power in the federal government. I have heard it claimed that there is an intimation to that effect in the disseminating opinions in the first child-labor case. This is erroneous. In that case congress had attempted to

prohibit the transportation in interstate commerce of an article manufactured by child labor. Every justice on the supreme court recognized that the question whether child labor should be employed in manufacture within a State was one to be determined by the State alone, and that congress could not forbid it. They also recognized that the power of congress to regulate interstate commerce was supreme. The question decided was whether congress could exercise its acknowledged power over interstate commerce, to accomplish indirectly that which it could not do directly—prevent the employment of child labor. The majority held it could not. The bar generally has approved its decision. It has always seemed to me to be sound, for a contrary rule would permit congress, through indirection, to usurp completely the powers of the State, to create one central government, and to convert the States into mere provinces thereof—in brief, to destroy local government. There is no warrant to believe that this opinion will be reversed; the record of the court will show that majority opinions are just as much adhered to as are those in which all of the justices concurred. But, if congress could be induced to create a federal board with power to curb production, the trial courts would be compelled to follow the majority opinion in the case referred to. It would be several years before the supreme court would have the opportunity to reverse that holding and sustain the validity of such board. Pending this delay, the problem would disappear or be solved otherwise.

No Power Under Defense Clause

Further, congress can not create a commission to control the production of oil upon the theory of providing "for the common defense and general welfare." The constitution does not give to congress power to enact any law that its wisdom approves, for these purposes; the power is simply to lay and collect taxes to these ends. Probably no principle is better settled than that congress can not exercise powers that the State never granted to the federal government and definitely reserved to themselves; it is the very foundation upon which the structure of our government is erected.

I think all of us would agree that if there should ever be a need for control by government of oil production it is unfortunate that this control can not be by the federal government; certainly it would be more uniform, more efficient, and fairer than control by the States. But we have to take our government as it is, deficient though it may be. In the solution of our oil problem we cannot expect a change to be made in the fundamental principle upon which our system of government is founded—the careful balancing of powers between the federal government and the States, leaving to the latter complete control over their internal affairs.

But I can omit further discussion of this phase. It has been completely covered recently in the very able address by Judge James A. Veasey before the American Bar Association. I think no lawyer who reads this address will thereafter contend that there is any power whatever in congress, either directly or through a commission, to control production of oil in the States; except, of course, upon the public lands and those of the Indians, wards of our nation.

There is no means under our system of government to procure the creation, by the group of States in which oil is produced, of one commission with power to restrict production in all of them. This lack of ability to compel uniform action with respect to a subject of interest to several States has been keenly felt in regard to water supplies. But under the constitutions of the United States and of the several States each of the latter in a separate and wholly independent sovereignty. I feel quite sure that it would require an amendment to the constitution of each of the interested States to permit its legislature to confer the power to control production of oil in that State upon a commission, at times sitting without that State, and composed in part of citizens of other States.

Power in States

Therefore, the sole power to put into effect any scheme to restrain production by law is in the State, and exercisable solely with respect to the production of that State. Oil is produced in 20 States. It would take many years to procure the passage of laws creating commissions to regulate production of oil, in all of them. But let us assume that this would only be necessary in the States of large production. This would require commissions with such powers in Oklahoma, Texas, California, Louisiana and Arkansas. None of these could be omitted from the scheme with any safety, for in each of them there has been, in the past few years, some one or more fields whose production made an excess in supply over demand in the entire country. Surely it should be anticipated that these instances will again occur. Even this would not give certain protection against a recurrence of over-production, if large deposits should be found elsewhere—for example, in Missouri, where I understand the geological conditions are favorable.

But I do not believe the requisite legislation could be procured in the five States mentioned. Endeavors to procure this would have to be made by the oil companies. No one else could be made sufficiently interested. No matter how camouflaged, as designed to conserve gas, it would be plain that the proposed measures were to restrict production of oil. Any legislator would know that this would increase the price of gasoline. The average legislator would think that the measures were intended to help the big oil companies at the expense of his constituents. Further, it is my experience that legislatures are not much interested in proposals for the benefit of all of the people of our nation. They are concerned chiefly in the welfare of the citizens of their own State.

Assuming that you could convince the legislature of California, for example, that restriction of production is essential for all the people, including Californians, would it not delay to act until Texas and Oklahoma should adopt measures to that end? Would not such legislative delays result from fear that its own people might be put at a disadvantage by failure of the other States to conserve oil? I think my pessimism is not unwarranted when we recall the failures, for over 20 years to procure uniform laws of divorce and of negotiable paper. There was no dispute of the necessity for these measures, nor suspicion of the purposes of their proponents.

Inefficiency of State Boards

But if such commissions were created they would not operate fairly or efficiently. The insecurity of the tenure of office and inadequate salaries would keep qualified men off and put politicians on such commissions. It has been my experience of over 30 years that these politicians, not always but usually, are influenced in deciding the problems presented, not by consideration of them, but by bias or prejudice or the purpose to gain votes. Before condemning this statement as intemperate, I request that the reader will recall carefully all of his experience with these State boards.

These several State commissions would act entirely independently of each other. There might be an occasional junketing trip to each other's jurisdiction, but no real opportunity to consult and determine upon some fair and harmonious plan to accomplish the purpose of their creation. There would be the usual jealousies and lack of faith in the good intentions of the other commissions. Each commission would believe that the others were permitting their citizens to extract too much oil, and that the citizens of its own State were thereby suffering. In each State there would be many citizens and many oil people to pour such tales into the willing ears of the commissioners. The latter would adopt sharp practices to favor their own citizens—would be induced to modify their regulations in return for specious promises of large development, construction of pipe lines, establishment of refineries, etc.

Of one phase at least of this problem, I am quite certain. That is that its solution will not be found in the conferring of powers upon State commissions to restrict production. This would only further muddle up the problem, and render more difficult an already very difficult situation.

Conservation of our petroleum resources is not an adequate remedy to protect the public, if there be any danger that these resources will be exhausted in a few years.

Let us make several assumptions that I think the reader will consider quite vio-

(Continued on page 45)

EDITORIAL COMMENT

NOW that the International Petroleum Exposition is a thing of the past, the visitors and exhibitors have returned to their normal work and the accomplishments of the exposition can be viewed with the advantage of a few weeks retrospection, we believe that all concerned will agree that it was the best exposition that the oil industry has ever held.

Those who worked so hard to make it a success, despite the terrible weather that was experienced, deserve the congratulations of the industry.

The exposition proved one thing: The idea which seemed to prevail in the earlier days of petroleum expositions, viz., that the larger supply companies should bear the brunt of the expense, is erroneous.

It proved that the specialty manufacturer can and will get sufficient benefit from the exposition to warrant his exhibiting for the actual benefits accruing. And it proved that there are sufficient such exhibitors to make an exposition a success.

It has been our idea right along that the larger supply companies should not be called upon to foot the bills of the exposition, and that, on the other hand, an exposition could be made a success without their paying out huge sums on it.

In our opinion, the status of a supply company insofar as the exposition is concerned should be exactly the same as that of any other exhibitor. If a supply company has a particular product which it wishes to exhibit, it should take enough space to exhibit that product and no more.

The 1927 Exposition was made a success only by extraordinary efforts on the part of disinterested oil men, and supply men, largely in Tulsa. They have, and deserve the praise of the industry, but it is unfair to impose that burden on them year after year.

We believe that official cognizance of the exposition should be taken by some national petroleum organization. A bi-annual or tri-annual exposition is of sufficient importance to the industry at large to warrant the American Petroleum Institute creating a special department to handle it. With the official recognition accorded it by the Institute the work of making a successful exposition would be infinitely lighter.

It is our belief that this special department of the Institute, if created, should be largely in the hands of the manufacturers and supply companies upon whom the financial burden would fall.

One of the things which appealed to the exhibitor at the recent exposition was the fact that it was operated as a non-profit-making enterprise. It should be continued as such, and doubtless will be.

We think that the idea is practical. Columns of *The* OIL WEEKLY will be open to any who wish to discuss the subject.

EXCEPT that it is known that the average reader hesitates to launch upon the reading of an article of its length we would not deem it necessary to urge a close reading of the discussion of the legal phases of the proposal to limit production through governmental action, written by Judge F. C. Proctor and appearing in this issue.

Judge Proctor is eminently well fitted to discuss the subject and having retired to private practice after a long period of service as general counsel for one of the larger companies engaged in all phases of the oil industry, he approaches it with no suspicion of having an end to serve in the interest of a client, nor hampered by an urge to appeal to the populace, as is the case when politicians discuss such problems.

His discussion of the limitations of the government in its powers to control this situation, and the dangers attending such control should the laborous changes in fundamental law be made, are sufficiently convincing that even the most ardent proponent of governmental interference must be convinced that the remedy does not lie in that direction. Further his discussion of the possible results to be obtained should the government, through any effort to prolong the supply of oil as a war measure, shows that the results of such efforts, should they prove successful, are so puny as to not warrant the consideration which has already been given by our national government to conserve the supply by regulating current production. The government is shown to be acting contrary to its purpose in attempting to bring about artificial scarcity and resultant higher prices of a commodity in general use by the people.

The people engaged in the business have much at stake, but it is a personal problem for action by the industry without asking the government to change its fundamentals to aid them. As the Judge has pointed out, the real source of relief is to get supply and demand closer together, and since it is apparent that supply is dependent upon chance findings of prolific fields which legal restraint prevents the operators in large measure controlling, the logical means of relief is to secure greater demand. And greater demand is certainly not encouraged by interference from governmental sources which, without more than a supposition to support them, issue warnings of immediate depletion of supplies.

It is to be hoped that the gentlemen to whom the article is addressed may see fit to turn their attention to securing greater use of oil supply which is now in sight, and defer advising the public of a pending famine until there is more evidence that a famine will ever be.

Buttonwillow Is California's First Gas Field

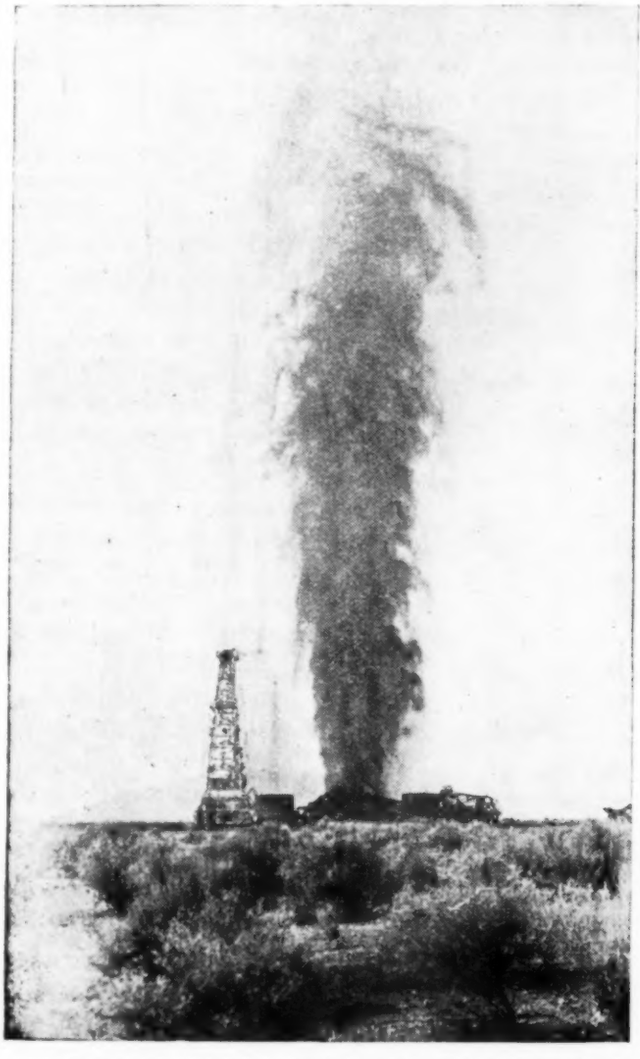
Only gas area in the State to be operated as such independently of oil production, has oil possibilities

By *GEORGE R. ELLIOTT,*
Petroleum Geologist.

ON August 4, 1927, Buttonwillow was brought in as a commercial field, not only the first great gas field in California to be operated as such, independent of oil production, but a field which still holds oil possibilities. After more than a year of work, beset by many mechanical difficulties and disasters, Milham Exploration Company completed its Kern 1A with an initial production of 12,000,000 cubic feet of gas from formation between 2361 and 3400 feet. This is the first success of the John Hays Hammond interests in California; the company's name, not yet well known, is formed from the name "Hammond," along with another famous name, "Ogden Mills."

The preliminary show put on by the Milham Exploration Company Kern 1, was much more sensational, although not so satisfying to the directors of the company. On November 3, 1926, the first well staged one of the wildest blowouts ever seen in California. As the drillers were coming out with a core from 3323 feet, the derrick man saw the cable slack off and the drill pipe shoot toward the crown block. A deep rumbling shook the earth, and when the derrick man hit the ground he found himself with the rest of the crew making an unofficial world's record for a 50-yard sprint. The gas issued with a tremendous roar and immediately ignited; within two minutes the steel derrick had melted like lead under the intense heat and crumpled to the ground. After belching forth hell until the following day, the well sanded up. It blew once more, but without igniting.

When on the third day the well finally died, the Milham field men and a throng of interested representatives of other companies stood gazing into a crater engulfing 7000 square feet of the earth's surface. A mass of mud and rock fragments covered the ground for hundreds of yards and partially buried the boilers. Lying in crumpled heaps were the derrick and 2500-barrel tanks; hurled in all directions were twisted pipe and miscellaneous equipment. A 50-million cubic foot gasser had taken this playful way of demonstrating its tremendous power. Today the second well stands beaned down to less than ½-inch while 5,000,000 cubic feet blow out into the air, and men of vision evolved plans which will carry this harnessed natural source of heat and power to the cities of the great valley of California and the San Francisco Bay district.



MILHAM EXPLORATION COMPANY'S KERN 1, NOVEMBER 3, 1926. THE DERRICK IS SUPERIMPOSED ON THE PHOTOGRAPH TO GIVE COMPARISON OF THE HEIGHT

Location

One of the accompanying maps shows the location of the Buttonwillow field with reference to the other fields of the San Joaquin Valley. The discovery well is 30 miles west of Bakersfield and a little east of the direct line between Elk Hills field, 20 miles southeast, and Lost Hills field, 14 miles northwest. The topographical situation is on the floor of the valley, and the field is marked by a swell too slight for the geologist's hand-level.

The subject of gas-production is not so familiar to most of us in California as that of oil production, so it may be well to review a few of the simple gas terms. What is a "wet" gas and a "dry" gas; what is a marsh gas? The terms "wet" and "dry" are clear enough in their general meaning, but have no definite line of demarkation between them. A gas is known as "wet" when it is found in the same stratum as oil and in intimate contact with it; "wet" gas is the gas from which gasoline is condensed. A gas is known as "dry" when it is not intimately associated with oil; it may be close to, but in a separate stratum from the oil. "Marsh gas" is gas found escaping from marshy ground, contains only methane as a combustible constituent, and is the driest of all natural gases.

Analysis of Gas

The bureau of Mines finds that natural gas is a mixture in which the hydrocarbons of the paraffine series predominates—principally methane (CH_4) and ethane (C_2H_6)—and that small proportions of nitrogen, carbon dioxide and water vapor are present; hydrogen sulphide is also sometimes found. The following table gives typical analyses of natural gases, including those from California oil fields and elsewhere,

	CO_2	O_2	N_2	CH_4	C_2H_6	B. T. U. Per Cu. Ft.	Spec. Grav. (Air=1)
Santa Maria	15.5	0.2	1.4	62.7	20.2	1044	0.81
Torrey (Ventura County)	6.8	.0	3.4	54.2	35.6	1240	.81
Coalinga	11.1	.0	.9	88.0	.0	937	.66
McKittrick	30.4	.0	2.4	66.2	1.0	724	.85
Los Angeles	1.0	.1	5.2	91.0	2.7	1019	.60
Sunset	10.5	.0	1.8	87.7	.0	934	.66
Fullerton	1.7	.0	2.1	86.7	9.5	1100	.63
Kern River	6.5	.0	1.2	84.3	8.0	1047	.66
Hogshooter (Oklahoma)	1.1	.0	4.6	94.3	.0	1004	.58
Oregon	.1	.0	97.9	2.0	.0	21	.96
Nevada	1.3	.0	3.1	95.6	.0	1018	.58
Grand County (Utah) (Bubbling up through marshy ground)	3.5	.0	6.5	90.0	.0	959	.62
BUTTONWILLOW—							
National Exploration Co. Wishom 1, Sec. 27-T28S-R23E	.4	.4	.0	90.0	8.3	1063	.62
Buttonwillow Gas & Pet. Co., Sec. 17-T-29S-R24E	.5	.0	.0	97.3	2.2	649	.72

along with Buutonwillow analyses.

It is interesting to note the similarity of the analyses of the gases from Coalinga and Sunset fields with that from Grand County, Utah, which is a genuine marsh gas and was found bubbling up through marshy ground. A still more remarkable comparison is that between this same marsh gas and the gas from the Hogshooter field:

	CO_2	O_2	N_2	CH_4	C_2H_6	B. T. U. Per Cu. Ft.	Spec. Grav. (Air=1)
Grand County (marsh gas)	3.5	.0	6.5	90.0	.0	959	.62
Hogshooter	1.1	.0	4.6	94.3	.0	1004	.58

To quote from a Bureau of Mines bulletin: "Hogshooter was one of the few samples of natural gas that contained only methane as the combustible constituent, when the sample came from a sand in close proximity to sands producing oil. Gas coming from the same sand as the oil, invariably contains other paraffine hydrocarbons. It is difficult to explain the presence of an enormous quantity of methane gas . . . in close proximity to oil sands. The phenomena might be connected in some way with the movement of the gas through strata, whereby ethane and still higher paraffin hydrocarbons were separated."

The methane present in a well is always in the gaseous form. Ethane becomes a liquid at a temperature of 35 degrees C under a pressure of 664 pounds per square inch. If a gas contained 50 per cent methane and 50 per cent ethane, there would be required a pressure of at least twice 664, or 1328 pounds to liquify the ethane at 35 degrees C.

The following conclusions briefly summarize the preceding remarks on gas occurrence:

1. Gas containing only methane as the combustible constituent may occasionally be found in oil fields, but is more typical of districts where oil has never been found, as in Nevada and Oregon; the occurrence of such gas escaping from the ground affords some proof of the absence of oil.

2. Gas containing both methane and ethane may be considered indicative of the presence of oil.

The analysis of the gas from Milham Exploration Company's Kern 1A, is not being made public at this time. It may be stated, however, that the gas is "dry;" that is, it contains little or no ethane. The heating value is represented by approximately 1000 B.T.U.'s per cubic foot, which brings it well within the commercial requirements.

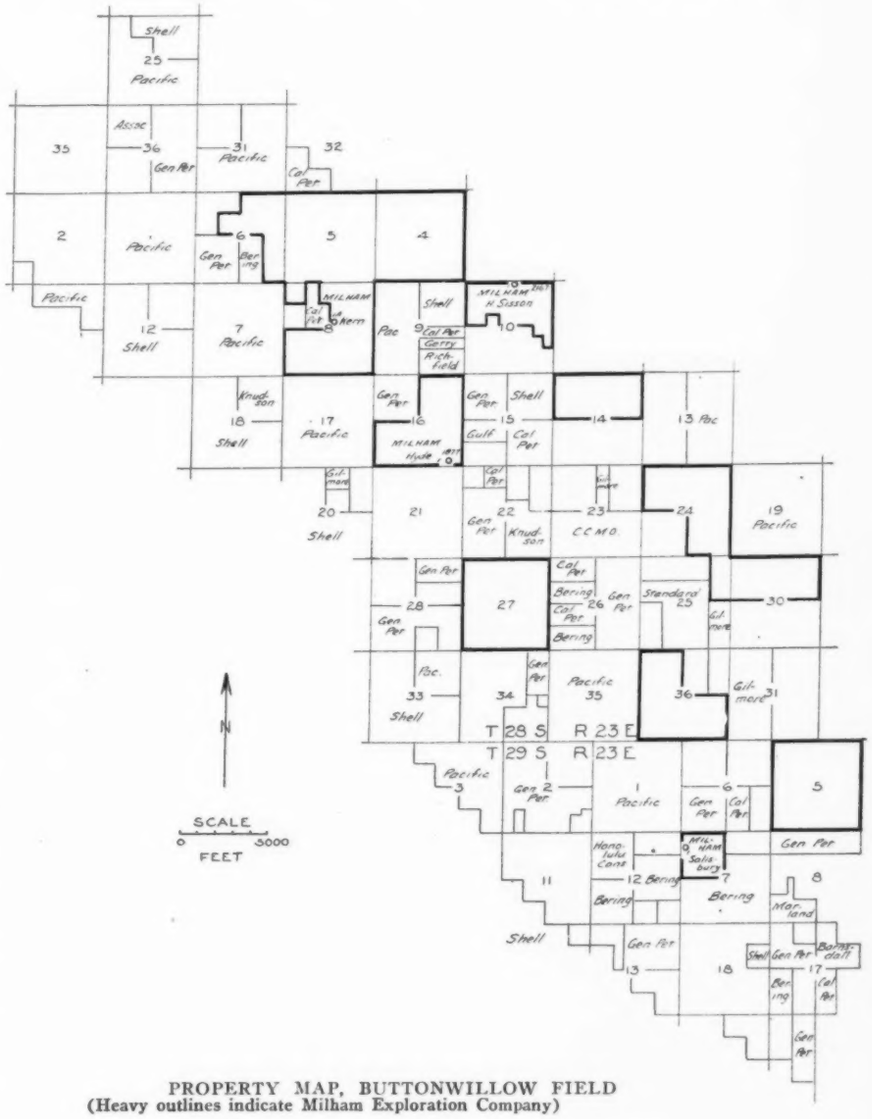
Tulare Lake

The first gas production from the portion of the San Joaquin Valley in which Buttonwillow is situated, was from Tulare Lake gas field, 30 miles north. In April, 1918, as noted by R. D. Bush, there were 50 shallow wells producing from that area, from depths 150 to 400 feet. Most of the wells were drilled for water and the gas occurred in the same beds as the water. The gas had no odor and was considered to be marsh gas. Deeper wells, (1500 to 2000 feet), reported no gas with the artesian flow of water. On May 28, 1919, the gas possibilities of the region were impressively brought to attention by the bringing in of the big Elk Hills gasser, Standard Oil Company's Hay 5, in section 36, T. 30 s., R. 23 e., for 33 million cubic feet from 100 feet of formation 1795 to 1895 feet. Later the same company's Hay 7, section 36, T. 30 s., R. 23 e., showed the possibilities of the 1200 feet of formation lying above the oil zone, by recording an initial daily production of 190 million cubic feet with a pressure in excess of 500 pounds. Other wells in the Elk Hills area logged gas as follows:

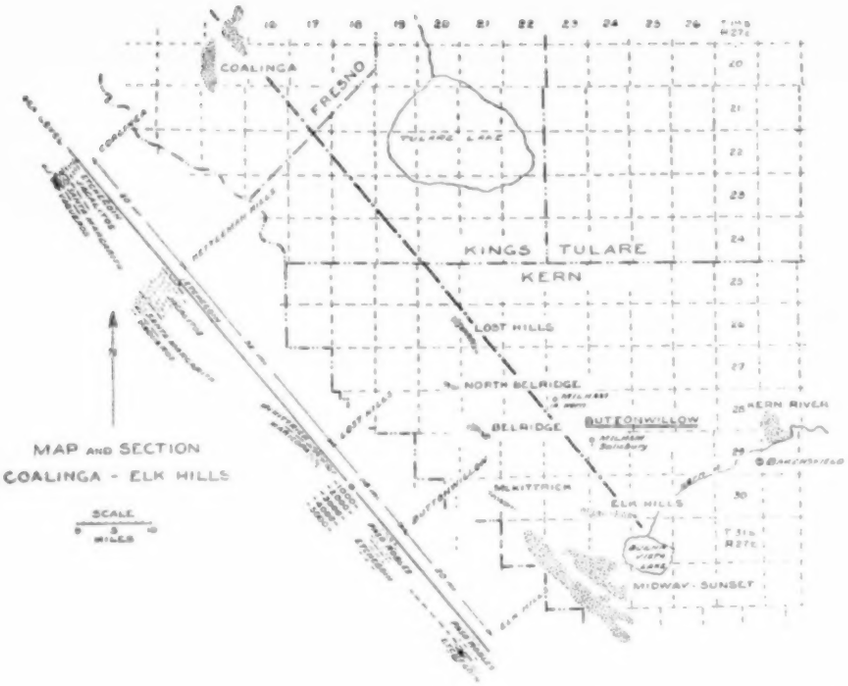
Associated No. 4, sec. 22, T. 30., S. R. 23 e, 610-828 feet.

Associated No. 1, sec. 26, T. 30 s., R. 23 e, 1090 feet.

(Continued on next page)



PROPERTY MAP, BUTTONWILLOW FIELD
(Heavy outlines indicate Milham Exploration Company)



Associated No. 1, sec. 30, T. 30 s., R. 24 e, 410-520 feet.

Hillcrest 1, sec. 28, T. 30 s, R. 23, 720 feet.

Buttonwillow Development

Drilling in the Buttonwillow district became active during the development of the Elk Hills field. The Shell Company and the Petroleum Midway (California Petroleum Corporation), drilled several wells in 1921. Northwest of the Milham discovery well, the Shell Company drilled about 12 wells for correlation purposes; these ranged in depth from 800 to 1200 feet; one Shell well was drilled to a depth of 4628 feet; this was Morris 1, located about three miles northwest of Milham's Korn 1A. On the southeast, National Exploration Company (Shell Company), drilled its No. 1 to 4857 feet; this was the nearest deep well previously drilled in that direction, and was four miles southeast of Kern 1A. California Petroleum's two wells were 4035 and 4455 feet, and were located three miles farther southeast. These wells were considered deep wells in 1921, and either gas pressure or mechanical trouble, or both, were factors present, which discouraged drilling deeper.

On the accompanying map a heavy dot-and-dash line has been drawn to indicate a cross section through the Coalinga anticline, Kettleman Hills anticline, Lost Hills anticline, Buttonwillow anticline (or "swell", as it is usually called.) The following is a generalized stratigraphic column at Buttonwillow, as recorded by R. N. Ferguson:

The lignitic formations (Etchegoin) recorded above constitute the productive oil zone at Elk Hills. The lower lignitic formation has never been drilled through at Buttonwillow. As shown on the cross-section, Lost Hills, the field to the northwest, produces its oil from the contact of the McKittrick (Pliocene) and Maricopa (Miocene). Extending our observation farther to the northwest, the oil at Coalinga is found below the Santa Margarita (a phase of the Maricopa) in the Vaqueros. Milham Exploration Company plugged back from 4660 to 3400 feet on account of caving of the formation, and in order not to take in too much of this high-pressure zone for the first test.

On the accompanying property map, the leases of the Milham Exploration Company are heavily outlined. The following is a list of the principal companies interested in the field, in approximate order of the size of their holdings:

Milham Exploration Company.
Pacific Oil Company (Standard of California.)
Shell Company of California.
General Petroleum Corporation.
Bering Oil Company.
California Petroleum Corporation.
Gilmore Oil Company.
Barnsdall Oil Company.
Knudson Oil Company.
Associated Oil Company.
Honolulu Consolidated Oil Company.
Marland Oil Company of California.

Milham Exploration Company's Salisbury No. 1, idle at 4148 feet, is shown on the map seven miles southeast of Kern 1A. The map also shows two other Milham wells, shallow but of considerable significance—Howard Sisson 1, two miles east and slightly north of Kern 1A, 2167 feet deep; Hyde 1, two miles southeast of Kern 1A, 1877 feet deep. As mentioned before, it is not possible to work out any surface geology here, and even the topographical evidence of structure is extremely slight. The success of the Milham Exploration Company may be considered due to the employment of modern methods of sub-surface correlation, based on the study of microscopic organisms from well cores.

600-1200 feet .....Coarse, loose sands, with thick partings of yellow clay.

1400 feet .....Blue clay, with frequent beds of hard sand and numerous thin beds logged as shells.

1200 feet .....Series of carbonaceous shale beds, here called the "Lignitic" formation, on account of the prevalence of carbonaceous material. The proportion varies from barely enough to give the shale a brown color, to that of a poor grade of lignite. Lignite is particularly prominent in the lower portion.

900 feet .....Upper—
Granular blue shales carrying frequent thin beds of brown carbonaceous shale. Brown color usually not recorded; formation shown on the log as "blue shale." Beds quite fossiliferous; fossils very fragile and almost impossible to preserve for careful examination, resemble forms found in Upper Etchegoin and Tulare in in the Kettleman Hills. Gas occurs throughout, and brown beds show presence of petroleum when tested with chloroform.

Lower—
Characteristic carbonaceous shales, with frequent thin beds of lignite. Numerous fossils, apparently identical with those in the upper portion, are found throughout.

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Setting Liner in Grayson County Gas Well

Denison, Texas.—Due to the cavey formation from which the Simpson-Fell gasser, near here, is producing, a six-inch liner will be placed in the eight-inch casing through the shale formation, and cemented at about 840 feet, according to plans of the owners of the well. It is hoped to finish this work by Thursday of this week.

The well blew in about 10 days ago and created considerable excitement when it made between 10 and 12 million feet of gas. There was also a slight spray of oil reported. Water has been cemented off and the oil showing was obtained Saturday, after the cement job had set, keeping out the salt water that was coming with the gas.

Interesting New Features Included In Eastland Air Plant

All air lines to wells are cross connected so that any compressor or combination of compressors can furnish air to any well

By A. R. McTEE
Staff Representative

IN its air plant recently completed in Crane County, Texas, Church & Fields pool, the Eastland Oil Company has introduced a number of interesting new features.

Chief among these is the special design high-pressure manifold, and the method of hooking up the wells. All air lines to wells are cross-connected so that any compressor or combination of compressors can furnish air to any well or combination of wells. This enables the operator to operate the various wells at a variety of working pressures without the necessity of all compressors carrying the maximum pressure of any single well.

The volume of air to each well is automatically controlled by Foxboro automatic volume controls which are all installed in a single control house near the main plant. Each Foxboro instrument is by-passed so that replacement, repairs, or adjustment can be made without interfering with the well if it happens to be on air. Air is by-passed around the instrument which is down and the well is kept flowing.

Considerable advantage is obtained by having all the control apparatus in one place. One operator can handle all eight wells on the lease, and a glance at the controls at any time will give him the condition at every well.

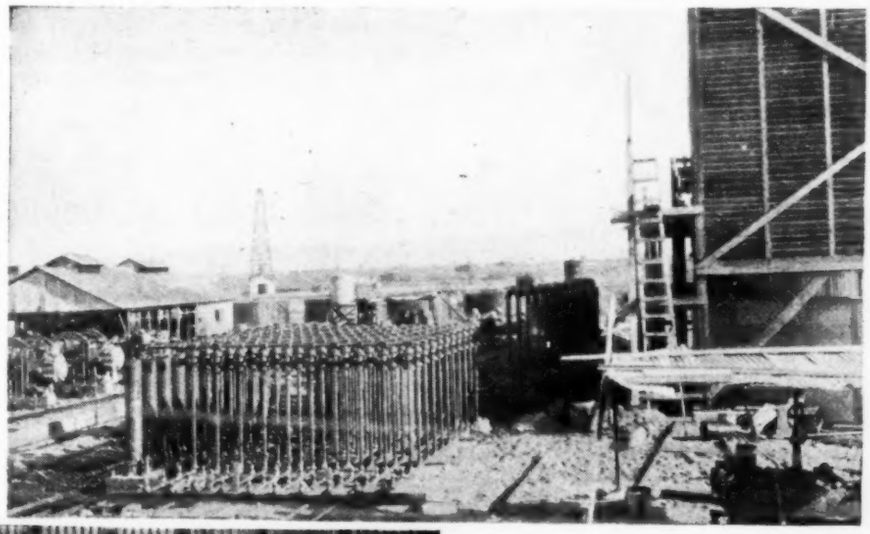
The instruments are all set on concrete bases with ample room for workmen to get around the controls whenever necessary.

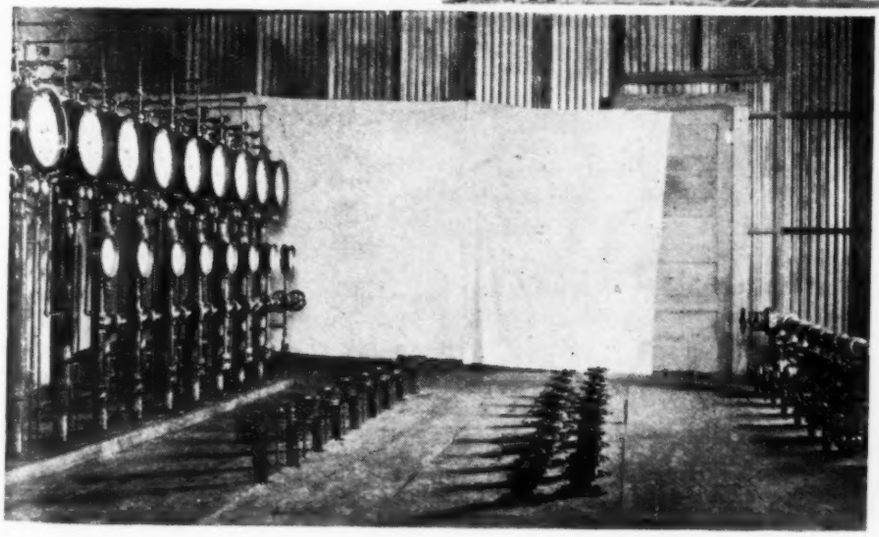
On both low and high-pressure air lines there are scrubber tanks which clean the air to get rid of moisture from condensation, lubricating oil from the compressors and dirt. One set of tanks receives the heated air as it comes from the compressor. Then, when the air is cooled in the condensing coils, and is put through the high-pressure side of the machine, it goes into the second scrubber before finally getting into the main air line.

The station consists of eight 80-horsepower, two-cycle Clark engines direct connected to two-stage compressors. Then there are three 125-horsepower four-cycle Clark engines driving two-stage vertical compressors giving the station a total capacity of about 860,000 cubic feet per day.

This equipment is housed in a steel truss galvanized iron building, 36 by 140 feet.

Another special feature of the plant is the water cooling system. A big tower has individual spray units for each compressor. The tower is 20 feet high by 32 feet wide by 64 feet long. Water is sprayed through 108 Thompson sprays and falls back on the air coils. Capacity of the plant is 1100 gallons per minute.





Above—Construction picture of Eastland air plant showing how manifold is cross connected. Below is view of interior of control house showing by-pass valves, etc.

The water supply comes from three wells on the lease.

Eastland has eight wells on the lease, which will be operated by air as soon as it is necessary to increase production. So far the production curve of the lease has been going up constantly and the depression in the price of crude oil caused most of the air plants in the field to shut down operations.

Expect Domestic Fuel Oil Consumption to Balance Gasoline Production

THE growing use of oil for heating homes and commercial buildings and the effect of this increase upon the entire oil industry were the principal subjects discussed by the directors of the American Oil Burner Association at their meeting in Philadelphia on October 11 and 12. Far sighted oil companies, it was reported, believe that in the 25,000,000 homes of the country lies the solution of the problem of overproduction. As one member expressed it, "The time is approaching when the home will utilize the greater part of the products remaining after the manufacture of gasoline by the cracking process."

The large integrated companies who have been forced to store a large part of their output for lack of a profitable market are paying close attention to the development of the domestic oil burner and looking forward to the time when the use of oil as a household fuel throughout the United States and Canada will go a long way toward balancing the rapidly growing production of gasoline.

Lionel L. Jacobs, of Toronto, president of the association, pointed out that with present production, there is enough crude petroleum in the country to furnish fuel to heat one out of every four homes. "Oil is no longer the fuel of the future," he said, "it is the fuel of the present. When we take into consideration the saving in labor, the superior cleanliness, healthfulness and economy of automatic heat, oil must be given first rank as a fuel for domestic purposes. The 25,000,000 barrels of oil now used for domestic heating, out of a total consumption of nearly a half billion barrels, shows the enormous opportunities for expansion in the sale of fuel oil for this market."

The directors agreed that the help of more oil companies should be sought in the 1928 educational program of the Oil Heating Institute, which is teaching consumers to appreciate the cheapness of oil fuel and its possibilities for domestic heating purposes. The Standard Oil Company of New York, Gulf Refining Company, Cities Service Refining Company, Crew Levick Company, Tide Water Oil Company and Associated Oil Company, Sun Oil Company and the Pure Oil Company subscribed to the Institute's work during this year. It was declared that as soon as the householder understands that every new automobile means an increase in the supply of fuel oil, he will realize that the use of oil for domestic heating is a sound conservation policy.

One of the directors called attention to the fact that fuel oil bears the same relation to the gasoline industry that glycerine bears to the soap industry. Glycerine is a by-product of the manufacture of soap. Through their success in finding outlets for glycerine in the arts, in the manufacture of explosives and as an anti-freeze mixture for automobile radiators, the soap manufacturers have prospered notwithstanding their high selling costs due to intensive competition.

Another speaker emphasized the need of showing the consumer that, far from reducing the supply of fuel oil, the growing demand for gasoline increases fuel oil production and reduces the prices of this commodity. Proof of this is the fact that fuel oil is one of the few widely used commodities which has decreased in price during the past 10 years, notwithstanding the tremendously enlarged demand.

The board of directors received a report on the campaign of consumer education carried on since June 1 by the Oil Heating Institute and signified their satisfaction with the results by voting to continue the campaign during 1928 and to raise an advertising and educational fund of at least $250,000 for this purpose. Leod D. Becker, managing director of the Institute, reported that as a result of this campaign, the Institute was receiving an average of 1000 inquiries a week for information about oil heating and that a large proportion of these inquiries had been traced to actual sales.

Progress was reported in overcoming objections to oil heating, chief among which, it was said, was the idea that it is more expensive than coal heating. Those present agreed that one of the most important factors in convincing the consumer that oil fuel costs no more than coal, and in many cases less, is the installation of adequate household storage tanks. In many instances, it was said, the impression that oil heat costs more than coal heat, is entirely psychological, due to the fact that many users equipped with small storage tanks have their oil delivered in small quantities, and the receipt of weekly or semi-monthly bills based on frequent deliveries may give the householder an exaggerated impression of fuel oil costs. One member told how he had convinced a customer that her oil was costing her less than coal by an actual comparison of oil and coal bills. Dealers will be urged to show their customers the importance of installing storage tanks large enough to hold a delivery of from 1000 to 2000 gallons, the latter quantity being enough to serve the average household heating plant throughout the winter.

The campaign of dealer education by the Oil Heating Institute will undertake not only to show the consumer how to figure costs on a fair basis, but also demonstrate the so-called "intangible" advantages of automatic oil heating—its cleanliness, its healthfulness and its effectiveness in releasing the housewife from domestic drudgery.

It was decided to hold the next annual meeting of the association at the Hotel Stevens, Chicago, on April 3, 4 and 5, 1928.

Sinclair and Fall Being Tried for Teapot Dome Conspiracy at Washington

Washington, D. C.—The first steps in the trial of Harry F. Sinclair and former Secretary of the Interior Albert B. Fall on charges of conspiracy to defraud the United States in connection with the lease of oil reserves in Teapot Dome were taken Tuesday in the Criminal Division of the District of Columbia Supreme Court in the selection of a jury. The lease was declared invalid last week by the United States Supreme Court.

This will be Fall's second experience in this particular court room, having spent several weeks there last winter as co-defendant with Edward L. Doheny on charges of conspiracy in connection with the Elk Hills leases. That trial resulted in his acquittal.

The only step out of the routine of selecting the jury Tuesday was a call by Owen J. Roberts of government counsel for H. M. Blackmer, who at the time of the leasing of Teapot Dome was chairman of the board of the Midwest Refining Company. It was known that Blackmer is in Europe and has no intention of returning for the trial, and Roberts explained that he meant his call merely for the record to show that Blackmer did not respond to his name.

It is not likely that any move will be made to cite Blackmer in contempt of court for failing to answer a summons served him in Paris. But it was intimated that later steps would be taken under the Walsh act to seize Blackmer's property because of his failure to answer.

The government Tuesday was represented by Major Peyton Gordon, United States District Attorney; Owen J. Roberts of Philadelphia; former Senator Atlee Pomerene, chief counsel in the oil prosecutions; George G. Chandler, and a number of assistants.

Sinclair is being defended by Martin W. Littleton of New York, former member of congress and noted criminal lawyer, and George P. Hoover of Washington. Counsel for Fall consisted of William E. Leahy of Washington and Mark B. Thompson of New Mexico, the latter an old friend and one of his counsel in the previous trial.

Natural Decline Is Taking Care Of Seminole

Despite erratic fluctuations on daily gauge, period of proration has passed and operations are rapidly declining

By WALLACE DAVIS
Staff Representative

TULSA—General weakness evidenced in the Greater Seminole area has reached a point sufficient to enable the industry to dismiss any fear that might come from temporary comebacks in the daily yield from the five pools. Without this weakness, which is becoming more outstanding each day, it might seem that predictions concerning the probability of a sharp decline within the near future are without foundation, and that Seminole was destined to carry on through the winter. At least such figuring might be considered logical from the fact that the daily production run continues to fluctuate as much as 10,000 barrels in a single day. While the total output for October 16 had dropped as low as 438,737 barrels, the yield for the following day registered 443,097 barrels.

Seminole, barring the opening of new productive areas, is now staging the strongest round of its last fight to stick in the limelight. Within the coming month it is due to land some good blows. There were 324 rigs running at the opening of the week—223 of these were standardized at depths below 3700 feet, and under normal conditions scheduled for completion within three weeks. Last week there were 17 locations staked. During that time there were 38 wells completed, representing a decline more than twice equal to the new operations starting. Moreover, this percentage has been holding true for the past two months. There were 28 less operations in the area Monday than on the previous Monday.

Little River

Little River, the newest, and one month ago considered the real hazard to the Mid-Continent oil market of the five producing spots of Greater Seminole, now has, even more so than a week ago, the ear marks of being somewhat of a fluke as far as production like Bowlegs, Seminole City or Earlsboro had is concerned. It will do well, in the opinions of Mid-Continent operators generally, to rival Searight for total output. Twelve wells have been added to Little River's list of producers within seven days, and the daily average yield stood at the end of that period less than 4000 barrels higher than prior to any of these completions. Less than two months since the second well was added to the discovery location, the field has 38 wells producing or showing oil October 17, and the average runs barely more than 1000 barrels per well. At the opening of this week five of the 35 producers were off production, 13 were being flowed by air or gas lift, nine were swabbing, leaving only eight flowing naturally. Eight of the 30 Little River wells on production Monday were making salt water.

Little River's performance and outcome within the past month has plainly brought out its hazard. The pay level is much nearer the water level than that of any of the other four pools of the Seminole area. For this reason many of the wells are on small production and will not be deepened for fear of encountering salt water. Operaotrs are choosing to let them continue small runs following the experience of the water trouble on deepening.

Little River's chances for expanding its proven pay circle are rapidly being limited. Gypsy Oil Company's Nungee 1, in the northwest corner of the northeast of the northeast of section 1-7-6, got water at 4281-90 feet, after finding a small show of oil in the Simpson Sunday. It will be drilled to the second Wilcox sand, but possibilities for paying production are cramped. This location lies on the east side of the pool, and dampens the hopes of operators with acreage lying further out. On the southeast side of the pool Gypsy's Wadsworth 1, in the center of the northwest of the northwest of the southeast of section 1-7-6, encountered salt water at 4250 feet Monday morning. It was bailed down, but salt water failed to diminish, and the hole is to go deeper. Blackwell Oil & Gas Company's Nitey 4, slightly northwest of the center of the pool, failed to get production from the Wilcox at 4245 feet and at 4405 in the second Wilcox was practically a failure. On the southwest side of the pool Barnsdall's Davis 1 was dry at 4410 feet in the second Wilcox late in September, the Twin State's Hyde, an offset to the south of the Barnsdall well, was dry at 4434 feet. These locations failing, practically shut down new operations on the southwest side.

On the northwest edge of the productive area of Little River Gypsy's Wakkie 1, in the southeast of the northeast of the southwest of 35-8-6, was a failure at 4292 feet.

At the close of the past week there were five locations at Little River, 14 rigs up, six operations shut down, 11 wells drilling above 2000 feet, six drilling between 2000 and 3100 feet, 12 drilling between 3100 and 3700 feet, and 54 holes below 3700 feet.

Among the new wells added to Little River during the past week, Blackwell's Nitey 3, located in the northwest of the southeast of the southeast of section 35-8-6, was ranking near the top with 1680 barrels swabbed from pay found at 4382-85 feet on October 11. Nitey 4, in the southwest of the northeast of section 1-7-6, made 80 barrels in two hours October 11, when swabbed after finding the Wilcox at 4222-25 feet. It is considered a practical failure after a rapid decline. At 4218 feet the well had a hole full of water. Philmack and the White Eagle Oil Company extended Little River production October 13, when it swabbed 59 barrels in one hour from 4275-80 feet. Location is in the northeast of the southwest of the southeast of section 2-7-6. It is two locations south of the Prairie Oil & Gas Company's House 4, which made 697 barrels on the swab from 4285 feet October 4. Mid-Continent Petroleum Company's Wadsworth 7, northeast of the southeast of the southwest of section 36-8-6, swabbed 1100 barrels from 4285-86 feet October 12. It was being placed on air October 17.

Tidal Oil Company joined the list of Little River producers during the week with three wells. The Jackson 1, in the southeast of the northwest of the northwest of section 1-7-6, swabbed 225 barrels from 4432-39 feet October 12, and one the same day its House 1, in the northeast of the northwest of the northwest of section 1-7-6, swabbed 960 barrels from 4107-13 feet. The House 2, in the northwest of the northeast of the northwest of section 1-7-6, flowed 300 barrels from 4290-4300 feet October 14, and was the only well flow-

ing naturally during the week in the Little River area.

On Monday Continental Oil Company's Cosar 2, located in the southwest of the southeast of the northwest of section 36-8-6, gauged 1329 barrels after being swabbed 24 hours. The total depth was 4212 feet, after Wilcox sand had been topped at 4198 feet, and operators were preparing to deepen Monday. Gypsy's Campbell 2, in the northwest corner of section 35-8-6, was being put on air when it failed to flow Monday from 4290-95. The initial yield of this well showed a rate of 585 barrels. Mid-Continent's Wadsworth 8, in the southwest corner of section 36-8-6, swabbed 400 barrels October 16 from the top of the Wilcox at 4337 feet. Blackwell's Nitey 8, in the northwest corner of section 35-8-6, swabbed 1435 barrels October 16, and Roxana's Jimsey 1, in the southwest of the northeast of section 1-7-6, had 1500 feet of fluid in the hole after topping the Wilcox at 4248 feet and penetrating the pay one foot October 17. In the event of a producer at this location the productive area of the field will be widened a location to the east.

Proration Unnecessary

At the rate of general decline in the Seminole area as a whole, indications were at the close of the past week that the restrictive measures would no longer be necessary, except probably for continued restrictions against the shooting of wells in the Little River area. Shooting of wells has been prohibited under the proration agreement in all cases recently with the exception of where a well was refusing to pay off at an offset location to a strong producer. Within the past three weeks the total daily yield of the area has been averaging more than 10,000 barrels below the maximum limit placed on the entire area. Under normal conditions members of the shutdown committee believe that production has little chance to again attain the 450,000 barrel level.

Earlsboro Fluctuating

The greater part of fluctuation seen in the Seminole area recently has resulted in eratic changes in production at Earlsboro. In many cases the rises there have come from old producers cleaning themselves or reviving after a shot. Gypsy Oil Company's Noble 3, in section 12-9-5, was flowing 6000 barrels at the close of the past week, after cleaning itself out. The increase was more than 100 per cent.

Earlsboro's two spectacular wells of the Independent Oil Company are continuing to hold to rare production levels. Gaines 1, in the southeast of the northeast of the northeast of section 11-9-5, was flowing approximately 8000 barrels Monday and showing no water. The Bruner 3, in the northeast of the southwest of the northeast of section 10-9-5, was holding at 6000 barrels from pay topped at 4375 feet. The Gaines 1 is producing from nine feet of Wilcox, topped at 4268 feet. The general high mark which is continuing to hold fairly well at Earlsboro is being maintained in part by the large number of producers added, and it is evident that a large number are going to continue to be added unless the daily run shows an immediate turn downward.

Out of a total of 225 producers at Earlsboro at the opening of the week, 85 were being produced by air or gas, 28 were pumping, 31 swabbing, 24 off, and the remaining 56 flowing. Forty-six of the producers were making salt water. There were four locations staked at Earlsboro, five rigs up, eight wells shut down, four drilling above 2000 feet, nine between 2000 and 3100 feet, 27 between 3100 and 3700 feet and 83 below 3700 feet. In the Earlsboro section, as in the the other four pools, more than one-half of the active locations are nearing the completion stage.

Bowlegs

The outstanding well of importance in the Belows sector during the week was Indian Territory Illuminating Oil Company's Hull 2, in the northeast of the northwest of the southeast of section 26-8-6, which swabbed 20 barrels from Wilcox topped at 4557 feet and penetrated to 4561 feet. This location is south of the Bowlegs field and north and slightly west of the Little River pool, and offered indications of starting play that had some chance of connecting the two areas. Hull 1, in the northwest of the southwest of the southwest of section 26-8-6, was dry at 4405 feet. It is one and one-quarter miles west and slightly south of Hull 2. After swabbing its first oil October 12, the well was making 210 barrels October 13, still on the swab, and about one bailer of water.

Forty-eight of the 257 producers at Bowlegs were making salt water at the close of the past week and 24 wells were off production on that day. There were 192 on air or gas, 13 pumping, seven flowing and 21 swabbing.

Activity at Bowlegs continues to decline. Early this week there were five locations staked, seven rigs up, 11 operations shut down, one well drilling above 2000 feet, nine between 2000 and 3100 feet, eight between 3100 and 3700 feet, and 65 drilling below the 3700 foot level.

Little activity is evident in the Seminole and Searight pools, and production in both areas is under a gradual decline. At Seminole City 105 of the 324 wells are making salt water, and 31 producers were off at the close of the past week. There were 127 wells producing by air or gas lift, 131 pumping, 28 swabbing, and only seven flowing. One location was staken, two wells shut down, one well drilling between 2000 and 3100 feet, two between 3100 and 3700 feet and 11 drilling below 3700 feet. Such a status reveals nothing in this field but the rapid emergence into a shadow of inactivity.

At Searight 14 of the 60 producers are making salt water, two wells are off production, 22 are flowing by air or gas lift, 12 pumping, 23 flowing and one swabbing. Field activity continued to show a decline there. Two locations were staked, four wells drilling above 2000 feet, one between 2000 and 3100 feet, six between 3100 and 3700 feet, and 11 drilling below 3700 feet.

New Lines

With the exception of two carrier lines under construction out of the Little River area, there is no new line work going on in the Seminole area. Magnolia Pipe Line Company was completing at the close of last week a five-inch line to its main and tank farm northwest of Maud. The Texas Company expects to have completed by October 25 a line from Little River to its main line at McAlester an eight-inch delivery line. The present pipe line capacity of the Greater Seminole area is estimated at approximately 532,000 barrels daily, while only about 380,000 barrels of this is in use.

Figures compiled on production from the five pools in the Seminole area to October 1 show a total recovery of 109-259,650 barrels, which includes 48,588,840 barrels from Seminole City pool, 26,119,-761 barrels from Bowlegs, 22,843,232 barrels from Earlsboro, 10,388,273 barrels from Searight, and 1,319,544 barrels from Little River.

Seminole City pool reached its peak production February 22, at which time its yield ran to 264,500 barrels. On June 15 the peak at Searight was reached with 40,621 barrels. Bowlegs produced its highest daily yield July 14 with 194,773 barrels, Earlsboro went to 209,874 barrels August 10, and Little River's first peak of 42,906 barrels on September 29 was broken Sunday of this week when the area gauged 45,624 barrels. The high mark for the Greater Seminole area came July 30, when the daily yield was 525,847 barrels.

Production for the Greater Seminole area for October 16 and 17 is as follows:

	Oct. 16		Oct.17	
	Wells	Prod.	Wells	Prod.
Bowlegs 257		127,037	257	129,925
Earlsboro 224		171,735	229	171,173
Seminole City.324		69,404	324	69,047
Searight 60		27,884	60	27,328
Little River .. 37		42,677	40	45,624
Totals 902		438,737	910	443,097

Complete Second Unit of Girvin Power Plant

Girvin, Texas—The Pecos Valley Power and Light Company is now completing its second unit to the big generating plant on the Pecos River here. Pecos Valley Power and Light Company supplies electric current to the fields in Crane and Upton Counties.

Continental Opens Office at San Angelo

San Angelo, Texas — Continental Oil Company announces the opening of a branch office in San Angelo. W. L. Christiana is to direct the land and lease work from this office, and H. J. Packard will look after geological matters on behalf of his company. Both Mr. Christiana and Mr. Packard are connected with the head office in Denver, but they will spend part of their time here, also.

Coastal Operations Center On Determined Domes

Volume of drilling now under way is result of discoveries made by geophysical exploration

By JACK LOGAN
Staff Representative

HOUSTON—Present operations in the Gulf Coast demonstrate the importance which the seismograph and the torsion balance have assumed in the search for oil in this region. In Coastal Louisiana nearly 50 per cent of the present wildcat operations are on domes recently discovered by means of the seismograph, while in the Texas Gulf Coast newly begun activity on the Lost Lake dome, Chambers County, leaves only three of the 11 geophysically discovered domes without activity at present.

In South Louisiana 15 domes have been discovered with the seismograph, including two that were found within the last few weeks by the Louisiana Land & Exploration Company. Among these 15 there are seven on which there is activity at present, one which has been drilled on but has no operations now, and seven that have not as yet had any locations made on them.

Construction has been started on the foundations for the two tests which the Louisiana Land & Exploration Company will drill on their new domes, located in Calcasieu Lake and in Vermillion Bay. Both locations are out in the water and require foundations of piling.

On the Sorrento dome, located east of the Mississippi, in Ascension Parish, the Gulf Refining Company of Louisiana is rigging up on the United Lands Company 3. Two other tests have been completed on this dome by the Gulf, but without finding production. Sorrento dome is about two miles north of the town of McElroy and is sometimes called the McElroy dome. It was discovered this year by means of the seismograph.

A recent report on Gulf's Dibert-Stark-Brown 1, the only test that has thus far been started on the Lutcher dome, La Fourche Parish, showed it to be down to 1296 feet in a sand showing some oil. Indications of a dome were found here last spring. The spot was named Lutcher dome due to its proximity to Lutcher townsite. It is about nine miles west and slightly south of Thibodaux.

On the Little Prairie or Kelso Bayou dome, Cameron Parish, the Calcasieu Oil Company is drilling its second test, the Caldwell 2, which is now below 3730 feet, where a sand, showing no oil, was cored. The Caldwell 1 and the Caldwell 2 comprise all the drilling that has been done on the dome. It was discovered about a year ago through the use of the seismograph. It is about 26 miles southwest of Lake Charles and 14 miles south of Sulphur. The old Hackberry dome, where natural indications of oil were found years ago, is about two miles west of the seismograph dome.

Fausse Point Active

Fausse Point, Iberia Parish, is now the scene of three operations. Gulf's Broussard 1 is drilling at 4255 feet in gumbo, while that company's State Z-3 last week was drilling at 715 feet in sand and gravel. Calcasieu Oil Company's Schwing A-1 was drilling at the same time at 3797 feet in rock. Three tests have been drilled on this dome in the past, each finding small production. At present all of them are off production. The Fausse Point dome

Tabular History of Geophysically Discovered Salt Domes in the Gulf Coast

LOUISIANA

Dome—	Parish—	Discovery Co.—	Year of Discovery	Total Tests Drld or Started	Present Producers Completed	Present Oprns. and Locations
Starks	Calcasieu	Gulf & Standard	1925	15	3	2
Darrow	Ascension	Gulf	1927	..	..	..
Sorrento	Ascension	Gulf	1927	3	..	1
Lutcher (Thibodaux)	La Fourche	Gulf	1927	..	..	..
Crosse Tete	Baton Rouge	Gulf	1927	..	..	..
Bayou Blue	Iberville	Union Sulphur Co.	1927	..	..	..
Bayou Henry	Iberville	Union Sulphur Co. & Standard	1927	..	..	..
Bayou de Glaise	Iberville	Union S.-Standard	1927	..	..	..
White Castle	Iberville	Roxana	1927	..	..	..
Fausse Point (Loreauville)	Iberia	Calcasieu Oil Co.	1926	6	3*	3
Napoleonville	Assumption	Union S.-Gulf	1926	2	..	..
Bayou Choctaw	Iberville	Gulf				
Kelso Bayou (Little Prairie)	Cameron	Calcasieu Oil Co.	1926	2	..	1
Calcasieu Lake	Calcasieu	La. Land & Exp. Co.	1927	1	..	1
Cypremont (Vermilion Bay)	Iberia	La. Land & Exp. Co.	1927	1	..	1
Total Louisiana				31	6	10

*All three have recently quit producing.

TEXAS

Dome—	County—	Discovery Company	Year of Discovery	Total Tests Drld or Started	Present Producers Completed	Present Oprns. and Locations
Orchard	Fort Bend	Gulf	1924	14	2	1
Fannett	Jefferson	Gulf	1926	16	..	1
Hawkinsville	Matagorda	Gulf		18	..	1
Long Point	Fort Bend	Gulf		40	..	3
Clemens	Brazoria	Roxana		11	..	1
Allen	Brazoria	Roxana		9	*1	3
Nash	Brazoria	Rycade	1924	42	†16	4
Lost Lake	Chambers	Pure		5	..	§5
Moss Bluff	Liberty		1926	5		
Ferguson	Washington	Sun	1927			
San Felipe	Austin-Waller	Gulf	1927			
Total Texas				160	19	19

*Prod. not commercial. †13 now producing. §Only 1 started; others lcns.

is otherwise known as the Loreauville dome. It was discovered by seismograph last year.

The Gulf Refining Company of Louisiana is at present drilling two tests at Stark's dome, Calcasieu Parish. The Lutcher-Moore Lumber Company 7, late last week was coring hard sand at 3780 feet, and the Industrial Lumber Company 8 was coring sand at 3325 feet. Starks is the only seismograph dome in Louisiana which has produced commercially. A total of 15 tests have been drilled there, including the present operations; three were completed as producers and are still producing.

Two Wells Abandoned

Two tests have been abandoned at Napoleonville dome, east of Fausse Point, and no new ones have been started. The seven geophysically discovered salt domes of Louisiana on which there has not yet been any drilling are shown in the accompanying table.

The latest development of interest among the domes of Coastal Texas discovered by geophysical methods is the beginning of the first activity at Lost Lake, Chambers County, by the Pure Oil Company. Last week this company was rigging up on the Lost Lake 1, located 550 feet north, 16 degrees east from a point of land which is the southwest corner of the E. H. R. Wallis survey, or 100 feet from the north shore line and 100 feet west of the lease line. It is in what is known as Little Lost Lake on the western side of the Wallis survey.

Four other locations have been made on the dome, but no immediate drilling is expected to be done on them. The location for the Lost River 1 is 840 feet from the southeast corner of the A. B. Mays survey, and also northeast corner of the E. H. R. Wallis survey; or 1400 feet southeast of the A. B. Mays survey and 100 feet from the west bank of the river. That of the Old River 1 is 253 feet west of the southeast corner of the J. Martin survey, 780 feet south from the southeast corner of the Martin survey or 43 feet from the west bank of Old River. The location for the Old River Lake 1 is 410 feet north, eight degrees west from the point of land which is the southwest corner of the Wallis survey; also 100 feet from the north shore line and 100 feet west of the lease line. The Trinity River State 1 has been located 2406 feet north from the southwest corner of the W. Gibson survey and 4301 feet east of the same corner; or 280 feet from the west bank and 65 feet from the east bank of the river.

The three seismograph domes in Coastal Texas on which there is not any activity are: Moss Bluff, Liberty County; Ferguson dome, Washington County, and San Felipe, in Austin and Waller Counties, the two latter being considerably inland, on the edge of the coastal region. Five tests have been drilled at Moss Bluff in the past without finding production.

Gulf Makes Location

At Hawkinsville, Matagorda County, Gulf Production Company has made a location for its Sanborn 4, following the abandonment of the Sanborn 3 as a failure. Outside of the Sanborn 4, there are no other operations there. Gulf is also doing the only drilling at Fannett, Jefferson County, and at Long Point, Fort Bend County, with one test, the Bordages 4, on the former dome and three on the latter, Roxana has one operation at Clemens dome, Brazoria County, and three at Allen dome, the same county.

At Nash dome the Rycade Oil Corporation has four operations, and at Orchard Gulf has one. Nash and Orchard are the only geophysically discovered domes in Coastal Texas which have produced commercially.

Three producers have been completed at Starks dome. They have yielded more than 220,000 barrels of oil, all this being since January 21, 1927. All three are still flowing, averaging around 900 barrels daily.

Orchard has produced over 200,000 barrels.

Allen, Nash and Clemens are notable as domes discovered by means of the torsion balance.

Pampa Well Making 4000 Barrel, Less Water

Amarillo, Texas—Just how much activity is in store for the new deep sand area in Gray County, is problematical at this time. However, the district known as the Pampa field is commanding attention. This week there was widespread interest in the Delaney No. 1 Jackson, which was holding its output at better than 4000 barrels, with less than 1 per cent water.

After the well was completed it made considerable water, showing as much as 5 per cent at one time, but recently the water content has slumped off until this week it was below 1 per cent.

The well is about four miles south of the Wilcox-Pampa district. Danciger's Jackson 1, block 2, is drilling ahead after having flowed 40 barrels an hour. This is an offset to the discovery well of the extension.

There are about a half dozen operations now getting under way in the deep sand area.

The crude market in the Panhandle is stronger now, due to a falling off in the output of the district. Completions have also been showing a tendency to slacken up.

This week there were 10 wells completed in the four counties including Gray, Hutchinson, Hartley and Wheeler. Of these, Gray led, with three producers and one dry hole. Gibson Oil Corporation's J. B. Bowers 1, in the deep sand extension, made 935 barrels from 3130 feet. The Empire and Wilcox each got small wells, but Riley & Heck's J. A. Hopkins 1 was dry, at 3305 feet.

The Prairie Oil & Gas Company and the Vacuum Oil Company got a 78-million cubic feet gasser in their Cal Merchant 1, at 2540 feet. Two other small oil wells were also completed in Hutchinson County.

Important Exploration Is Started in Oklahoma

Tulsa.—New play of widespread importance is getting under way on the western edge of Oklahoma's productive area along a topographical "high" which geologists have outlined as extending from Southern Kansas as far south as Electra, Texas. The structural rise, as concluded from geological research and core drilling, is shown as being continuous at least between the above mentioned points, and might even be found to extend further.

Logan, Garfield and Kay Counties are in the main line of the interesting play, and will receive much of the exploration work started.

Marland Oil Company has made location for a test in 16-18-4w, Logan County, a location in section 30-23-3w, one in section 19-23-3w, and one in section 24-24-3w, all of Garfield County, and a location in 9-25-2w, Kay County, which is in the northwest extension of the Alcorn pool. The Gypsy's Smith 2, several locations north of Marland's Kay County location, is swabbing 50 barrels of oil from 4721 feet.

The Argo Oil Company has location for Mollie Howell 2 in the southwest of section 14-27-3w, Deer Creek pool, eastern Grant County, which is also along the newly outlined structure.

The intensive work under way of recent weeks and other work planned in this territory for the near future is considered largely the outgrowth of strikes like Roxana's in northwestern Logan County, Marland's strike five miles northeast of the Garber field, and the Amerada's recent gas strike south of Roxana's McCulla well in section 19-23-4w.

Two Wells at Spindle Top Make 4700 Barrels

Houston — Spindle Top furnished the bulk of the new production in the Gulf Coast region during the past week, two wells in that field yielding a combined initial of 4700 barrels, while all other fields in Coastal Texas and Louisiana yielded only 1530 barrels.

The larger of the two Spindle Top wells was the Sun Oil Company's McLean 7, completed for 3200 barrels at 5025 feet; the other was Gulf Production Company's Mann 7, initial 1500 barrels from 4175 feet. Sun's McLean 12 in this field was abandoned dry.

Two small producers were completed at Goose Creek, Gulf's Hoffman-Gaillard 8 and the same company's Stateland Producers 11, initial production 125 barrels and 30 barrels, respectively.

Mills Bennett Production Company and the Moody Corporation completed a 700-barrel well at Barbers Hill; Rycade brought in a work-over well at Nash dome; and Brownie-Babbett Oil Company completed a test at Orange as a 30-barrel well. The three others of the 11 tests completed in the Texas Gulf Coast were failures; they were at Hull, Pierce Junction and Hawkinsville.

Yates Field Shows No Bad Effect From Shut-In

Second semi-monthly open flow gauge shows wells holding up and field's potential production at 240,653 barrels daily

By A. R. McTEE
Staff Representative

SAN ANGELO, Texas.—Interest in the West Texas area centered largely about the Yates shallow field, Pecos County, where the second hourly gauge was taken this week. Under the proration agreement entered into some time ago between purchasers and operators, the wells are to be gauged twice each month and the proration percentage figured from these gauges. The recent gauge gave a potential production of 240,653 barrels daily, based on a 24-hour run. The proration figure is 12.466 per cent of the total, or 30,000 barrels, the present pipe line capacity.

That many of the Pecos County wells have not shown any material decline was proved during the test. Mid-Kansas Oil and Gas Company's Yates 6 flowed 1045 barrels for one hour through a two-inch and two four-inch lines. Yates 3 belonging to the same company, flowed 761 barrels per hour through three four-inch and two three-inch lines. Other wells held up better than has been predicted for the second gauge.

Just how long the field would hold to the 240,653 barrel mark is problematical, however. This week there were rumors of increasing water in the field, and one company had four tanks of crude oil rejected because the water content was too high. Reports from the field early in the week stated that the Mid-Kansas and Transcontinental's Yates 3B in the southeast corner of section 61, I. & G. N. block 1, was showing considerable water, and it was also stated that other wells showed as much as 15 per cent water on Saturday of last week. Yates 3Z is practically an offset to Marland's Yates 1A, which has had water showing for some time, and the Mid-Kansas well is also directly across the river from the Gulf's Thompson 1, the first well in the field to make any water.

Operators in the field do not regard the water encroachment as serious at this time. In fact most of them have been looking for it before now.

Important completions in the Yates pool this week included four wells with a combined initial production of 30,550 barrels. Marland and McMan Oil Company's Yates 2 was the biggest producer, coming in for an estimated output of 12,080 barrels daily, at 1291 feet. The well flowed at the rate of 545 barrels per hour until it was pinched in. Yates No. 4 was completed by the same companies for 83 barrels per hour at 1355 feet. The California Company's Smith 1 flowed 500 barrels per hour from 1330 feet and is now shut down for storage. Roxana Petroleum Corporation's Tippett 1 made 418 barrels an hour from 1400 feet.

Several new locations were made in the field during the week, and the proration gauge showed 32 producers now completed.

Other fields in the West Texas district showed little change in activity over last week. Landreth Production Corporation entered the list of producers in Winkler County with a well which made an initial output of 1135 barrels. A check on activity in the Winkler County, Hendricks field, showed five locations, 16 derricks and rigs, 34 drilling wells, 22 producers shut down in the lime, and one completed producer this week. Total yield of the field was estimated to be 10,625 barrels, a slight gain over last week.

Gulf Production Company resumed drilling on one of its wells, which has been shut down on the lime, and will

YATES FIELD

Proration agreement effective from October 16, 7:00 a. m. to 7:00 a. m. October 31. Total production of the field as per hourly gauges amounted to 240,653 barrels per day. Pipe Line capacity maximum from October 16 to October 31 inclusive is 30,000 barrels. Proraton figure is 12,466 per cent of Total.

Company, Lease—	No. of Wells	Bbls. per 24 Hours	Pipe Line Runs Daily Proration
Mid-Kansas Oil & Gas Co., I. G. Yates "A"	7	81,820	10,200
I. G. Yates "B"	3	43,112	5,374
I. G. Yates "C"	1	5,306	661
Smith-Taylor	2	8,008	998
Marland Oil Company, Yates "A"	1	9,417	1,174
Gulf Production Co., Smith et al	1	2,167	269
Thompson	1	3,683	459
The California Company, I. G. Yates	3	28,444	3,546
Smith	1	10,106	1,260
Simms Oil Company, Smith	1	3,582	447
McMan O. & G. Co. & Marland, Yates	6	34,787	4,337
Roxana Petroleum Corp., Trippett	1	4,835	603
Smith "A"	1	1,372	171
Humble Oil & Refining Co., Smith	1	2,876	359
Red Bank Oil Co., Smith	1	1,050	131
Allsman & Bell, Pecos River Bed	1	88	11
Grand Totals	32	240,653	30,000

The status of field operations in the Hendricks field, Winkler County, Texas, at the close of last week is shown below:

Operators—	Locations	Dks. & Dr. Rigs	Tests	Shut Down on Lime	Comp. Wells	Initial Prod.	Present Prod.
Amerada Petroleum Corp.	..	1	1	..	..	....	....
Arizona Mining & Eng. Co.	..	1	..	..	..	....	....
Atlantic Oil Producing Co.	..	1	3	1	..	....	....
Geo. M. Church-Field et al	..	..	1	..	..	....	....
Cranfill Bros. Oil Co.	..	..	1	..	..	....	....
Cranfill-Reynolds et al	1	..	2	..	..	....	....
Gulf Production Company	..	1	1	4	..	....	*910
Humble Oil & Refining Co.	..	1	2	2	..	....	....
Independent Oil & Gas Co.	..	1	1	2	..	....	25
Landreth Prod. Corp. & Roxana	..	3	2	2	1	1,135	1,135
Liner Drilling Co. et al	..	..	1	..	..	....	....
Marland Oil Company	1	1	2	..	..	....	....
Joe Maxwell & L. C. Turman	..	1	1	..	..	....	....
Murchison-Cranfill & Marland	2	..	1	..	..	....	575
Murchison-Cranfill et al	..	..	1	..	..	....	....
Pure Oil Company	1	1	3	1	..	....	*840
Republic Prod. Company	..	1	2	..	..	....	....
Roxana Petroleum Corp.	..	2	2	1	..	....	....
Southern Crude Oil Purchasing Co.	..	1	5	8	..	....	*7,140
Texon Oil & Land Company	..	..	2	1	..	....	....
Totals	5	16	34	22	1	1,135	10,625
Totals Previous Week	9	15	16	30	9	23,395	9,940

probably deepen others within the next few weeks.

Production Gains

Total production of the entire West Texas district gained 12,308 barrels over last week's figures. This was due largely to the gain in Pecos County output. In this field the yield increased from 13,135 barrels a week ago to 28,360 barrels for the week ending October 15. There was little change in Crane County. Completions gained two over the entire district during the week.

Transcontinental Oil Company's wildcat in Southeastern Pecos County, on the Blackstone & Slaughter ranch, was drilling ahead this week at 1655 feet. Last week this well forced itself to the attention of operators when it encountered a show of oil amounting to about 25 barrels, in brown sandy lime pay at 1510-30 feet. Should the well develop into a commercial producer, it would mean big play for acreage in Terrell and Pecos Counties.

Operators throughout the entire district are rushing tankage to completion as fast as possible. Figures in THE OIL WEEKLY of last week showed tankage under construction amounting to 5,926,000 barrels, and capacity of 14,390,000 barrels already completed. There is undoubtedly enough oil in sight to fill all these tanks, and more too, but the extensive tank building program will aid in keeping production figures close to their present level.

Crews working on the Illinois Pipe Line Company's line to Del Rio, have made connections from the Pecos field to within a short distance of Del Rio, and crude will be started through the line as soon as it can be tested. The Mid-Kansas Oil and Gas Company has completed 11 80,000 barrel tanks on its tank farm east of Del Rio.

Better Than Average Wells Completed in Central West and North Texas

Fort Worth, Texas.—During the week just ended, the Central West and North Texas districts held up, with completions above normal, and a number of wells of more than average production were completed.

Brown County led all other sections with a total of 15 wells, 14 of which were producers. The output ranged from five to 800 barrels. E. L. Smith got the best producers on his Moore lease, in the Smith-Ellis pool. No. 8 gauged 800 barrels from 1340 feet, and 18 made 610 barrels when drilled two feet deeper than No. 8. Moore 1 was good for only 154 barrels, from 1288 feet, but it extended production slightly toward the northeast.

Announcement has been made that two new gasoline plants will be built in the Smith-Ellis area, one by the Amerada Petroleum Corporation , the other by Roxana. Both will be four-unit plants and will use gas from the Smith-Ellis district. Gas from there tests approximately four and one-half gallons of gasoline per 1000 cubic feet.

The Patterson Refinery in Brownwood has been taken over by Brown County operators and plans are under way to start it to operating as soon as possible, probably within the next 30 days. Repairing and overhauling is now under way. Capacity of the plant will be between 750 and 1000 barrels daily.

Throughout the North Texas area most of the completions were small, and there were a good many failures reported.

A good deal of interest has been aroused in Baylor County by core tests being drilled by the Roxana Petroleum Corporation. This company is also testing in Knox County, but no leasing is yet reported from either locality as a result of the coring work.

The Texas Company also has a torsion balance outfit operating in southern Hardeman County.

Wilcox Oil and Gas Company has made a location for a test on its block of acreage in western Knox County, about four miles from Truscott, toward the northeast. Exact date for starting the test has not been announced.

In the shallow area of northwestern Jack County a number of new locations are being made, and wells will be drilled as fast as machines can be moved in. Production in this district is obtained from around 500 feet, but the wells are small, averaging not more than 25 barrels.

The Navarro Oil Company extended the Cross Plains field with a producer on the Bennett and Booth land. The well was small, but it will undoubtedly be a deciding factor in causing other tests to follow. Prairie Oil and Gas Company is getting ready to drill a north offset, on the Ida Webb tract, and Shaw and Rathke will also offset on the Miller land.

Operators throughout the North, Central and West Central part of Texas are inclined to be optimistic over the general situation in the various sections. The fear of a crude cut does not seem to be prevalent. If there is any danger of a reduction in the price of oil it is generally believed that the sour oil from the West Texas fields will be most likely to suffer.

Nowhere in the North and Central West fields is there an unusual amount of activity in sight, but many rigs are busy on both inside and wildcat acreage.

Pyote Becomes a Supply Center for Winkler

Pyote, Texas.—Pyote is rapidly becoming the supply center for the Winkler County oil fields, as judged by the number of companies establishing branches here.

Companies that have already built or have their store buildings under construction include The Atlas Supply Company, Oil Well Supply Company, Republic Supply Company, Frick-Reid Supply Company, Continental Supply Company, International Supply Company, Taubman Supply Company, Dunnigan Tool and Supply Company, Acme Tool Company, United Iron Works, Parkersburg Rig and Reel Company, American Tank Company, International Derrick and Equipment Company, Emsco Derrick and Equipment Company, and Lee C. Moore & Company.

Oil companies which have branches here are Magnolia Petroleum Company, Gulf Production Company, Humble Oil and Refining Company, Roxana Petroleum Corporation, Atlantic Oil Producing Company, Republic Production Company, Landreth Production Company, Murchison Oil Company, and American Petroleum Company.

The last mentioned company has recently completed a 52-car loading rack on the Texas & Pacific tracks just east of town and also has a six-inch pipe line to the Hendricks field.

Natoma, Kansas, Field to Have Electricity

Wichita, Kansas.—The Central Kansas Power Company last week was completing an electric high-line to the Natoma, Rooks County, field. Drilling will be started on the Davis-Pruter 1 test three miles northwest of Natoma, in the southwest of the southeast of section 30-19-15, Osborne County, on completion of the line. The line is being run from the Fairport pool.

Four locations have been made in the vicinity of the Vickers Petroleum Company and A. H. Krueger's Luhman 1 in secton 11-9-16, which is being pumped daylight hours, making around 50 barrels. A 10,000 barrel tank has been erected near the well, and a pipe line is expected to be laid from Natoma shortly, at which time the producer will be pumped full time.

Derby Petroleum Company's test in the southwest of the southeast of 30-9-15, Osborne County, was preparing to spud last week, and the test in 3-10-16 was drilling around 2500 feet, with formations running about 90 feet higher than the Natoma discovery well and 60 feet higher than the Russell pool.

Open West Texas Branch

Dallas, Texas.—J. T. McCarty, Jr., president of the Hercules Pipe Supply Company, announces opening of a branch office at Wink, in Winkler County, to serve the fields of West Texas. This location is 18 miles north of Pyote, and the warehouse and pipe yards will be located at the latter place.

Long Beach Shows Possibilities Of Deep Production

Deepest hole in area yields 2100 barrels initial and may lead to extensive development; Seal Beach holding up

By BRAD MILLS
Staff Representative

LOS ANGELES.—The famous Long Beach (Signal Hill) field has gained its second wind and promises some sensational developments in the lower part of the main producing sand, which apparently has latent possibilities of the first magnitude. One by one, the operators are pushing their wells deeper, and the latest results are of such a nature as to cause the ultra-conservative producer to fear a large increase in the production of the field, which only a few years ago threw the entire petroleum world completely out of balance. Whether the recent deep completions presage a further increase in production remains to be seen. There is the possibility that only one of several wells deepened will develop a large production. During the past month several very large producers have been completed, strengthening the belief that the lower layers of the main sand are equally as productive as the upper stratum. Due to the late developments in the deepening campaign several of the larger companies have adopted a policy of secrecy. Several wells are past the point expected to yield the best wells, but sand indications point to still deeper production than has yet been developed.

The California Petroleum Corporation's Davidson 6 was the sensation of the week. The well was completed at 5672 feet, with an initial production of 2100 barrels of 30 gravity oil. It was the deepest gusher ever completed in the field. The completion of the remarkable well indicates a revival of both drilling and deepening activities.

A glance at the number of completions recorded in the Huntington Beach field during the past week is somewhat impressive, but a careful analysis of the total initial production shows the puny effort the field is making to maintain its present output. The operators are making a strictly legitimate effort to develop their holidngs, but a small well below 4000 feet is anything but encouraging. The upper or tar sand is yielding wells of about the same size as those completed during the early history of the field. It appears that offsets do not have the same effect on the shallow wells as on those completed in the light oil sands. The main producing sand is not showing the old "kick," and a 250-barrel well is considered a lucky strike in many sections of the field. The average initial production probably runs near 125 barrels.

The best well of the week was the Crudoil Company's No. 8, which was a 225-barrel producer from 4455 feet. The company has developed a large production in the field. The Standard Oil Company completed Pacific Electric 13 and 15 at 3820 and 3920 feet, respectively, each with a production of 125 barrels. Sand conditions below 3500 feet indicated a larger production. Crude from both wells tested 21 gravity and showed an average cut of less than four per cent. The Allen Brown interests have completed a 225-barrel producer in the tar zone at 2200 feet. The well was far above the average in many respects and indicated that the upper sand producers may be as large in the future as many of the deep sand wells. The gas pressure in the Brown well was nearly 300 pounds. The Coast Line Oil Company has recompleted No. 1 as a 100-barrel well, after cleaning out and redrilling to 4350 feet. The oil is only 15 gravity and is cutting about eight per cent. The smallest producer ever completed in the Huntington Beach field has been completed by the Young and Lundberg interests, who were keenly disappointed with a production of only 10 barrels from their townsite well. There is a possibility of an increase, as such a producer is very unusual. The South Basin Oil Company has put Dabney 2 on production from the upper zone. The well had an initial production of 50 barrels, with an average gas pressure.

Ventura

Judging from permits granted for new wells, operators in the Ventura field may be expected to continue at the present rate for several months. The Associated, Shell and Star Petroleum interests have recently made new locations. Production continues to hold steadily around 57,000 barrels, with nearly all wells producing at capacity. The Petroleum Securities Company's Orton 2, which was the sensation a week ago, is still producing well up toward its initial output of more than 2000 barrels. The G. J. Magenheimer interests' Hartman 1, which has failed to produce at several levels, will again be tested, this time at 6650 feet. A plug was recently set at 7000 feet to test a zone just above that level, but the experiment was a failure. The total depth of the hole is 7300 feet. The well first attracted attention with the discovery of a promising sand near 6500 feet. The well was given every chance to produce but failed.

The Barnsdall Oil Company's Edwards 1, which was completed a week ago with an initial production of 250 barrels, thereby ushering in a new light oil field for California, has settled to 140 barrels, with some water still in evidence. Although in a distinctly new district, the Edwards will is showing some of the faults which have made the ultimate value of the main Goleta field somewhat questionable. The well was originally drilled to 2720 feet but pluged back to 2481 feet for the test which opened a new producing district on section 31-4n-30w. The extremely high gravity of the oil—41—indicates that the well is producing from sands corresponding to those in the original Goleta district. It is an important fact that nearly all light oil producers in the immediate region yield considerable water with the oil. The separation of the two is comparatively simple.

Kern Front

The Kern Front field maintained its consistent pace, with two good completions recorded during the week. The General Petroleum Corporation's Sill 13 was far above the average, having had an initial production of 400 barrels from 2230 feet. The company has completed a series of good wells in the field. The Petroleum Securities Company successfully completed B1, section 22-28-27, as a 100-barrel well. The producer was much smaller than the average but is pumping comparatively clean oil. The Associated Oil Company has virtually completed two wells on section 23-28-27, but has made no test of either. These wells will be the first for the Associated, although it holds extensive acreage in the field. Drilling permits issued for wells in the field are slightly less than during September.

Round Montain

Very little change has been noted in any of the tests under way in the Round Mountain field, where several

efforts have been made to complete a second producing well. The Elbe Oil Company has been unable to make any progress in No. 6, due to a difficult fishing job. Total depth is now 2775 feet, with only slight oil showings. The company is negotiating with the Honolulu Consolidated Oil Company toward the sale of all holdings on the structure but nothing definite has been announced. The Associated Oil Company had all material on the ground for a test on section 34-28-29.

Seal Beach

The Seal Beach field refused to give ground during the past week, holding steadily at 66,000 barrels. New wells totaled eight, of which six were recompletions. The two new wells were the Associated Oil Company's Bryant, which was a Bixby zone producer in the main field and the Petroleum Securities Company's Par-Parsons 3, which was carried to the lower sands for the original completion. The former was an 800-barrel well at 4490 feet and the latter had an initial production of only 200 barrels from 5360 feet. Of the recompletions, Paul Getty's Alamitos 1 was the most noteworthy, with a new initial production of 1500 barrels. The well was recompleted at 5525 feet, indicating that the lower zone is deeper in spots than was anticipated. M. W. Pannell recompleted No. 1 at 5443 feet and again brought his production back to life. The new initial was 1200 barrels, or approximately the same as the original production in the shallower sand. The remaining recompletions were not impressive, yet were sufficient to keep production at the level of a week ago.

One by one idle wells are bobbing up in every part of the field, particularly Alamitos Heights. This is taken to mean that if developments are not satisfactory in the best parts of the field the wells lying around the fringe will never be drilled further. With small wells already making their appearance near the apex, there is some doubt as to the value of those not so favorably located. Of the 50 drilling wells in the field, nearly two-thirds are in the process of deepening. About 30 wells are idle, while at least as many additional locations and rigs dot the landscape.

The principal slump in production has been noted in the Alamitos Heights sector. The main part of the field, which has seen no deep drilling, and which is entirely controlled by Associated, Standard and Marland, is producing at practically the same rate as two months ago.

Sulphur Mountain

Reports that the Bradford & Geis interests had completed a commercial well on Sulphur Mountain have proved premature, although there is considerable oil and gas in the hole. The well has developed some very promising sand below 1900 feet, but an actual test has not been made. Total depth of the hole is 1995 feet. The gas pressure is not great enough to cause a consistent flow. The well is located on section 21-4-22 and is nearly four miles from the nearest production. The structure is in the same general area as the Santa Paula field. Crude from the well tests slightly under 20 gravity and contains nearly 20 per cent gasoline. A battery of storage tanks is being erected preparatory to testing the well.

Rincon

The outcome of the Petroleum Securities Company's (Pan-American) first Rincon wildcat, State 1, is being watched closely by the leading operators of the State. The well has been drilling in a very promising oil sand for several hundred feet and will be tested after a string of 13-inch casing is cemented at 2790 feet. The first oil showing was found at 2660 feet and deeper drilling disclosed even better prospects. Total depth of the hole is 3225 feet. The log of the well indicates commercial production, according to local geologists, who are not interested in the development of the wildcat area.

The San Clemente Oil Company has encountered a 25-foot sand in its Hawthorne-Lawndale test south of Inglewood has run a string of 8¼-inch casing to 5175 feet to test the formation from that point to 5200 feet. An analysis of the sand disclosed the fact that the well is located higher on the structure than other wells drilled nearby.

The spotlight has again been thrown on the Petrero district, just outside the city limits of Los Angeles, with the announcement that the Associated Oil Company will immediately test the well as soon as a string of 6¼-inch casing can be run. The new depth of the hole is 4717 feet, with the formation showing streaks of gray sand and brown shale. The well stood for months at 4450 feet but failed to make a commercial producer after flowing mud, water and some oil.

Deeper drilling in the Miley Oil Company's Calnan well, northwest of the Huntington Beach field, has failed to improve the showings found around 4400 feet, according to reliable reports from the well. The formation is a gray sand at the total depth of 4930 feet.

San Juan Capistrano Gets Notice

Los Angeles, Calif.—The area near San Juan Capistrano is attracting considerable attention, due to the discovery of a good oil showing in the O. K. Carr test, which has temporarily suspended drilling to set a string of 8¼-inch casing to test the sand encountered at 3945 feet. The formation was drilled to 3962 feet, with the oil still in evidence. The immediate district has not been looked upon favorably by several of the large companies, but the showing has done much to erase the doubt manifested in the past.

Prairie Passes Dividend to Provide Storage

Tulsa.—The board of directors of The Prairie Oil and Gas Company voted October 14 to pass the October dividend on the stock of the company. The officials made no formal announcement except to say that this action was taken to conserve cash. It is well known that the Prairie has been buying and storing large quantities of Mid-Continent crude oil during the overproduction period since the Seminole field was opened up last year and now has under construction several million barrels of steel storage in Seminole and other fields.

The same conservative policy was followed by the Prairie in 1925 and early in 1926, at which time the similar conditions existed. On October 31, 1925, the quarterly dividend was passed and also on January 31, 1926. Following this action the payment was changed and resumed on May 31, 1926.

The action of the Prairie in passing its dividend for this quarter is generally considered a constructive move in the long run, and stockholders in the company have felt the move heretofore well justified inasmuch as several million dollars invested in steel storage and low priced crude was believed a sounder policy than small personal checks paid by a company trying to conservatively fight a period of general depression.

Excitement at Bakersfield Abating

Bakersfield, Calif.—The course to pursue in the Pacific Eastern Production Company's Union Avenue well, near this city, is becoming more and more a problem. The well, which first had all the earmarks of a producer, has been drilled far below the level which caused all the excitement, but additional depth failed to improve the situation. The hole was plugged back to 4420 feet and will stand for a few days. There is little evidence of the excitement of two months ago, although the area still has plenty of friends, not the least of which is the Pacific Eastern Production Company. The company has leased a large block of acreage northwest of the well and is drilling another test near Fruitvale.

Offer Kern River Leases

Washington, D. C.—Three tracts of land in the Kern River oil field of California will be offered for oil and gas leasing at a public auction at Sacramento, November 15, it has been announced by the Interior Department. The tracts consist of 80 acres, 160 acres and 40 acres, respectively.

The department anticipates a heavy attendance and spirited bidding for the leases in view of the interest manifested by the large companies in the field as a result of the drilling activity in the vicinity of the tracts which are to be offered.

PERSONAL MENTION-MEN YOU KNOW

A. L. Thomas, independent operator of Shreveport, was on a business trip through the Mid-Continent territory last week, and spent several days in Tulsa.

H. C. Mulroy, vice president in charge of traffic for Marland Refining Company, and city commissioner of finance at Ponca City, has been announced as a candidate for mayor there.

R. W. McElvain, president of the Pure Oil Company, headed a group of officials of the company on a tour of inspection through West Texas fields last week.

J. Paul Getty, well known California operator, has sailed for the United States after an extensive European tour.

W. L. Stewart, E. W. Clark and R. D. Matthew, president, vice president and comptroller, respectively, of the Union Oil Company, are returning to Los Angeles after an extended business trip to New York and other eastern cities

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W. B. Tobin, who is connected with the International Derrick & Equipment Co. at Los Angeles, is visiting the home office of his company in Columbus, Ohio.

W. F. Huff, of the National Supply Company of California, is spending some time at the company's national headquarters at Toledo, O.

Roy Collum, chief geologist of the Marland Oil Company in California, has returned to his office after a short vacation at Catalina. Mr. Collum made several desperate attempts to hook a swordfish in the Catalina channel, but none had the nerve to strike.

W. C. Brower, manager of the crude oil department of the Vauum Oil Company, arrived in Houston the middle of last week for a business and social visit. His headquarters are in New York City.

R. G. Gray of Houston, formerly material foreman for the Rio Bravo Oil Company, has been promoted to the office of assistant land man of that organization.

M. F. Cribbs, of Houston, field engineer for National Supply Company, has spent some time in the company's Casper offices making an investigation of field machinery in Salt Creek and other central Wyoming oil fields.

A. L. Wentworth, purchasing agent for the Union Gas Corporation, Independence Kansas, spent several days in Tulsa on business last week.

Charles E. Markey, Link Belt Company representative, Indianapolis, Indiana, has recently returned from a trip through part of the Mid-Continent territory, including a business visit in Tulsa.

W. R. RAMSEY,

of Oklahoma City, Okla., a member of the firm of Ramsey Brothers, Oil Producers, with holdings in the Mid-Continent and California fields.

William Barr recently joined the organization of the Rotary Disc Bit Company as assistant general manager. During the past five years he served the Regan Forge & Engineering Company as director of manufacturing, while from 1913 to 1921 he was superintendent of the large plant of the Hughes Tool Company at Houston.

Harry Howard, sales manager of the Reed Roller Bit Company, has returned to Houston from a 30-day trip to the Pacific Coast.

Olin Jones of the Empire Companies has returned to Bartlesville from a visit of several days in Kansas City.

C. R. Krause, western sales manager for Lee C. Moore Company, headquarters at Tulsa, left last week for New York City for a vacation.

Dr. C. H. Wright, independent operator of Los Angeles, died at his home October 10.

Ed Ross, farm boss for the Superior Oil Corporation, near Keystone, Oklahoma, was reported seriously injured in an automobile accident near Tulsa Monday of last week.

H. F. Urban, secretary of the Howard Bean Drilling Corporation, at Amarillo, Texas, was visiting in Tulsa last week. He was formerly connected with operations in the Okmulgee, Oklahoma, section, and still holds leases in the State, the most important of which are in Pottawatomie County.

Dr. Charles E. Decker, professor of paleontology at the University of Oklahoma, and Dr. Charles L. Gould, director of the Oklahoma Geological Survey, will attend the October 28-29 session of the Fort Worth Paleontological and Mineralogical Society at Fort Worth, and will take the field trip following the session.

W. W. Scott, petroleum engineer of the Atlantic Oil Producing Company, has been transferred from Seminole to Odessa, in West Texas, after spending several months in the Seminole area.

Robert F. Garland returned to Tulsa early last week from an airplane trip to Salt Lake City, Utah. Mr. Garland and E. G. Anderon, drilling contractor, who is now drilling a well for the Garland Oil Company in Jones County, Texas, are completing plans for an air trip to New Brunswick, Northeastern Canada, for a moose hunt.

J. D. Tomlinson has been appointed factory representative of the Spencer Trailer Company of Augusta, Kansas, according to an announcement by F. G. Spencer, president. Mr. Tomlinson will make his headquarters at Augusta.

J. R. B. Moore, assistant manager of the land department of the Vacuum Oil Company, has returned to Houston after an absence of about two weeks, during which he was in Kansas City, Jefferson City, Denver, Colorado Springs and Fort Worth.

T. Rieber, formerly president of the Galena Signal Oil Company of Texas, has recently been made vice president of the Texas Corporation, in charge of export sales.

Charles C. Phelps, sales engineer of the Hill Clutch Machine and Foundry Company of Cleveland, Ohio, has been placed in charge of that company's metropolitan district office, Room 528, 30 Church Street, New York.

Captain William J. McKie, 72, died at his home in Corsicana, Monday, October 17. He was a pioneer in oil circles of Texas and was said to have drawn up the original charter for The Texas Company. He owned 1500 acres in the heart of the Powell field, which produced approximately 10,000,000 barrels. He is survived by his widow and four children, all of Coricana.

Texas Division Will Meet at Fort Worth

Fort Worth.—J. D. Collett, president of the Texas Division Mid-Continent Oil and Gas Association, stated recently that the annual meeting of that organization for 1928 will be held in Fort Worth. Tentative dates have been set for the second Friday in November.

HOW OIL MEN PLAY

J. B. Moore Believes That Tennis Is Most Healthful Outdoor Sport

J. B. Moore, civil engineer in the production department of the Tidal Oil Company, Tulsa, has been playing tennis consistently for 30 years and at the age of 53 his game is better than ever, and he enjoys it more. He admits he is a tennis player and that he spends most of his spare time on the court, but the facts of the case come from his friends—that he knows the game as do professionals, and that he is hard to beat.

Tennis, in the opinion of this veteran racket-man, is the most wholesome of outdoor sports. The tennis player, he says, gets the best all-round exercise of all sportsmen, because practically every muscle in his body is about equally moved; moreover, it is the game that trains the ye and keeps the mind busy as well as the physical side. Tennis is considered as a girl's game only by those who have never played, he explains, declaring it to be a he-man's sport in every sense of the word.

Mr. Moore is a natural athlete and the father of an athletic family. He has four sons, three of whom are old enough to enter sports of some kind, and each one, as he has come up, has followed the father in developing his athletic ability naturally there through fine physique and good health. William, his oldest son, is a member of the varsity football squad at Princeton University. He was captain and all-state tackle on the Tulsa High School football team in 1923, and in 1925 was captain of the grid squad at Mercersburg Academy, Pennsylvania. He is only 22 years old. J. B. Moore, Jr., 20, is a sophomore in Oklahoma A. & M. College, and is this year a good prospect for the wrestling team there, in the 135 pound class. He was captain of the Tulsa High School wrestling team in 1925. Lawrence, the third son, goes out for the Tulsa High School football squad this year for the first time, and, having the huskiness of the father and older brothers, is one of the school's brightest prospects. Tom Pat, 4 years old, is already beginning to throw things, his father says.

Mr. Moore has been an engineer for the Tidal for the past 10 years. Prior to this time he was the county surveyor for Cherokee County for 10 years. He was an engineer with the commission of the Five Civilized Tribes from 1899 to 1906. From 1895 to 1898 he was with the United States Geological Survey as surveyor.

He was born in Okalona, Mississippi, May 8, 1874, and came to the Indian Territory in 1889. His first engineering work in this territory was to help survey and allot land to the Five Civilized Tribes. He has seen Oklahoma grow from cow trails to concrete roads. He was in Tulsa in 1896, when the city's population was approximately 1000.

Aside from his chosen game of tennis, he is an outdoor sport generally. His accuracy at hitting pecans in the air with a rifle vouches for his marksmanship. His choice class of fishing is fly-casting.

Mr. Moore plans for the building of a pine log cabin on a 10-acre tract which he owns on the banks of the Illinois River, near Tahlequah, Oklahoma. The cabin will be large enough, he says, for a dance hall on the first floor.

Mr. Moore also is the father of two daughters. The athletic ability of the men of the house is equaled by his wife's ability as an artist, and the walls of their Osage County home, near Tulsa, are lined with her own paintings.

J. B. MOORE

Two Hundred Barrel Well for Associated

Los Angeles.—Associated Oil Company has discovered a new light oil field at Potrero by completion of a 200 barrel well at 4717 feet. This discovery is very important as it may mean a townlot drilling campaign.

The well is flowing and promises to do much better when it clears up.

Asociated seems to have the best acreage on the structure which had been condemned by most large companies. A big leasing campaign is on.

The crude is 36 gravity and will be clean. Location is just outside Los Angeles and near Inglewood.

West Texas Production

CRANE COUNTY

	Producing Wells	Daily Average Prod.
Church & Fields—		
Simms Oil Co. & Atlantic Oil Prod. Co.	26	34,170
Landreth Production Corp	15	14,500
Eastland Oil Co. & Collett-O'Keefe	8	13,500
Tidal Oil Co. & Turman-Maxwell	19	10,320
Humble Oil & Refining Co.	11	6,340
Magnolia Petroleum Co.	25	5,050
Pecos Oil Company	10	4,715
Prairie Oil & Gas Company	10	*4,390
Gulf Production Company	10	1,485
Geo. Church-Fields-Weekly	3	1,600
Independent Oil & Gas Company	3	810
The Texas Company	2	280
Geo. Church & Bob Fields	2	260
Stidham & Thrasher	1	10
Totals	145	97,430
Gulf-McElroy—		
Gulf Production Company	51	18,500
Gulf-Waddell—		
Gulf Production Company	1	15
Marland-Hughes—		
Marland Oil Company	10	750
The Texas Company	10	250
McMan Oil & Gas Company	2	50
Independent Oil & Gas Company	1	10
Totals	75	19,575
Totals for Crane County	220	117,005

UPTON COUNTY

	Producing Wells	Daily Average Prod.
Texas Pacific Coal & Oil Co.	15	2,950
Marland Oil Company	76	2,425
Dixie Oil Company	36	2,650
Roxana Pet. Corp.	39	2,315
The Texas Company	19	1,350
Prairie Oil & Gas Company	8	1,535
Gulf Production Company	15	510
Humble Oil & Ref. Co.	9	1,010
Independent Oil & Gas Company	26	630
Champlin Refining Company	1	550
Amerada Pet. Corp.	6	305
Snowden & McSweeney	1	200
Sun Oil Company	10	215
Wentz Oil Corporation	3	125
Tidal Oil Company	3	120
Republic Prod. Co. & Marland	6	120
Pure Oil Company	1	100
Simms Oil Company	3	50
Atlantic Oil Producing Company	1	35
Bryant & Atlantic	2	30
McMan Oil & Gas Company	2	25
White Eagle Oil & Ref. Co.	1	20
Texon Oil & Land Company	1	15
Totals	284	17,285

JONES COUNTY

	Producing Wells	Daily Average Prod.
Phillips Petroleum Co.	10	915
Marland Oil Company	3	345
Mid-West Exploration Co.	4	200
Stebbins Oil & Gasoline Co.	1	15
Atlantic Oil Production Co.	1	....
Totals	19	1,478

BIG LAKE (REAGAN COUNTY)

	Producing Wells	Daily Average Prod.
Big Lake Oil Company	117	18,895
Texon Oil & Land Company	79	5,435
Totals	196	24,330

PECOS COUNTY

	Producing Wells	Daily Average Prod.
Mid-Kansas & Transcontinental	12	19,545
Simms Oil Company	1	850
Roxana Petroleum Corporation	1	2,080
The California Company	2	1,225
McMan O. & G. and Marland Oil Co.	4	2,175
Marland Oil Co.	1	1,120
Gulf Production Company	1	315
Gulf Prod. Co. (Crockett Co.)	1	335
Humble Oil & Refining Company	1	600
Crude Oil Co.	1	90
Red Bank Oil Co.	1	25
Totals	26	28,360

WINKLER COUNTY

	Producing Wells	Daily Average Prod.
Landreth Pro. Corp. et al	1	1,135
Southern Crude & R. A. Westbrook	2	6,100
Southern Crude Oil Purchasing Co.	3	1,040
Pure Oil Company	1	840
Gulf Production Company	1	910
Murchison-Cranfill-Marland	1	575
Independent Oil Company	1	25
Totals	10	10,625

MITCHELL COUNTY

	Producing Wells	Daily Average Prod.
The California Company	96	2,445
Magnolia Petroleum Company	22	585
Atlantic Oil Prod. Co.	8	225
Eastland Oil Company et al.	9	175
Tidal Oil Company	2	35
Fred Carey et al	1	20
Totals	138	3,485

HOWARD COUNTY

	Producing Wells	Daily Average Prod.
Marland Oil Company	32	1,160
Magnolia Pet. Co.	34	1,065
Pure Oil Company	3	270
Lockhart & Company	7	100
Frank M. Greene Corp.	2	130
Bristow & Merrick	3	65
F. H. E. Oil Company	1	55
Humble Oil & Refg. Co.	2	35
Mid-West Exploration Co.	2	50
Godley Oil & Gas Co.	1	80
L. C. Harrison et al	1	20
Owen-Sloan et al.	1	25
Comet Pet. Company	1	25
Marland and Texon Oil & Land Co.	1	25
Gulf Prod. Company	1	15
Dixie Oil Company	1	10
Totals	93	3,130

CROCKETT COUNTY

	Producing Wells	Daily Average Prod.
Cushing Ref. & Gasoline Co.	1	395
Humble & Marland Oil Co.	13	660
J. K. Hughes Dev. Co.	5	230
Republic Pro. Co.	2	145
Carl Cromwell	3	150
Gulf Production Co.	6	115
Taylor-Link Oil Co. and Kirby Pet	1	400
Roxana Pet. Corp.	1	20
Totals	32	2,115

GLASSCOCK COUNTY

	Producing Wells	Daily Average Prod.
Marland Oil Co. & Texon Oil & Land Co.	2	...

RUNNELS COUNTY

	Producing Wells	Daily Average Prod.
Ladd-Hill & Sillix	1	115

SCURRY COUNTY

	Producing Wells	Daily Average Prod.
The Northwest Company	5	45

LOVING COUNTY

	Producing Wells	Daily Average Prod.
Lockhart & Company et al	2	20

ECTOR COUNTY

	Producing Wells	Daily Average Prod.
J. C. Cosden and The Texas Company	1	15
Totals for all fields	1029	208,008
Totals, previous week all fields	1030	195,700

(*) Production partially pinched.

Mountain States Field Development Notes

Midwest Completes Two Wells on Iles Dome

Denver, Colo. — Midwest Refining Company completed two gushers on Iles Dome this week, Nos. 18SD on Lot 37, 23-4n-92w, and No. 34SD on 22-4n-92w. Both were good for 500 barrels and both are in the Sundance sand which was proved for production last April when the Midwest completed Parkinson 4 on section 22-4n-92w at 3242 feet, now producing 450 barrels through a one-half inch choker. Moffat Dome, nearby structure to Iles, has also been in the limelight recently with the imminent completion of the Texas Production Company's Knowlton 10 on lot 18, section 4-3n-91w; the well has 3,000,000 cubic feet of gas and is flowing 100 barrels daily; the Sundance is expected at any time.

Production from the Sundance has had a very important bearing on the situation throughout the Rocky Mountain region, since it has greatly increased the possibilities of all fields in the territory.

Three Additional Tests on Hiawatha Dome

Rock Springs, Wyo.—Morris-Myers interests have authorized the drilling of three more tests on their properties on Hiawatha Dome, and operations are to begin immediately. The discovery well on the northeast quarter 22-12n-100w gauged 55,000,000 cubic feet.

The Reiter-Foster interests are shut down in their test on 16-12n-100w at 1450 feet. The shut down is temporary.

Ohio Oil Company is jarring on pipe at 1400 feet, southeast quarter 22-12n-100w.

Prairie Oil & Gas Company's test on 18-13-99 is down about 400 feet.

The joint test of the Producers & Refiners and the Marland interests on 26-20-104, have the derrick up.

Start Two More Tests on Ant Hills Structure

Lusk, Wyoming.—Buck Creek Oil Company is starting two more wells in the Ant Hills district to test out the limits of this new structure. One is on school section 36-37-63 and the other is in the northwest quarter of 30-37-63. Rigs are up on both locations and drilling has started. In deepening its discovery well on this structure the company found water at 4004 feet. Oil was discovered in a sand believed to be the Muddy several weeks ago. Upon testing, a production of 300 barrels developed by bailing. It was decided to drill deeper and 6¼-inch pipe was cemented at 3981 feet. Water was not unexpected in the Dakota at 4004 feet because this checks with the formation in the Lance Creek district eight miles west of Ant Hills. Next objective is the Lakota. Location of the discovery is in northeast quarter section 25-27-63.

Otero County Gas Co. Changes Ownership

Denver, Colo.—Otero County Gas Company, which furnishes gas for the towns of La Junta, Rocky Ford and Swink, changed hands when the entire stock of the company was sold to the Public Utilities Consolidated Corporation of Delaware, controlled by the W. B. Foshay Company of Minneapolis. It is intimated that the new owners plan eventually to tap the natural gas line which, in all probability, will be laid from Amarillo to Denver.

Casper Consumption

Casper, Wyo. — Refineries operated here by the Standard Oil Company of Indiana, the White Eagle Oil & Refining Company and The Texas Company charged to their stills in 1926 approximately 1,100 barrels. This was a daily average of 47,500 barrels.

Increase Runs

Casper, Wyo.—Standard Oil Company of Indiana's Casper refinery has increased its crude run from 20,000 barrels to 30,000 barrels. This represents a 50 per cent increase and requires the employment of 150 additional men. The total employment at this refinery is now about 1050 men.

Major General James G. Steese, formerly at the head of the Alaskan railway commission, has accepted a position with the Gulf Oil Company of Colombia and in the future will be stationed in Colombia, S. A. He has been in Washington, D. C., until recently, when he left for his new work. The General was formerly in the engineering corps of the regular army and spent seven and a half years in Alaska, where he made a splendid record handling the government's business.

Lieutenant Commander W. H. Osgood, inspector for the U. S. Naval Shale Reserves in Colorado, Wyoming and Utah; Fred E. Wood, petroleum engineer for Midwest Refining Company, and J. W. Steele, supervisor of the Mineral Leasing Division, U. S. G. S., all members of the technical subcommittee on oil and gas conservation in the Rocky Mountain region, are leaving this week for Ponca City, Oklahoma, to attend the meeting of the general committee. They will be joined there by the chairman of the committee, Max W. Ball, president of the Argo Oil Company.

Water Problem Is Hard to Overcome

Basin, Wyo.—Water difficulties in the Torchlight field east of this town have proved more stubborn than was anticipated, and the operators in the field have not had much luck in their attempt to shut off the menace. Producers & Refiners Corporation cleaned out several old wells and made an attempt at a shut off by running a string of pipe with a wall packer, but in most cases the packer has failed. Company has completed cleaning out and putting on the pump of three wells recently; in each case although there was considerable fluid, it was mostly water.

Torchlight Oil Corporation are drilling in its old hole on section 19-51n-93w and the Richards interests are spudding their test on 13-51n-93w. Agate Oil Company is drilling a test on 22-51n-93w, and is locating another on 30-51-93w.

Gas Filtration Plant

Lovell, Wyo.—A treating or filtering plant near her is to be built by the Cross Gas Company for a natural gas distributing system for Lovell, and to remove the hydrogen sulphide from the Ohio Oil Company's gas well on Garland Dome. This will insure an ample supply of gas for the town for both domestic and industrial consumption. An additional charge of two cents per 1000 cubic feet will be made for the treated gas. Both the glass factory and the brick and tile factory are heavy consumers of natural gas and their requirements come at a time of the year when there is not a heavy domestic demand.

Demonstrate New Carbon Black Process

Casper, Wyo.—Dox Carr has exhibited the carbon black process, of which he has control in this territory, to the local officials of the U. S. G. S., with great success. The new plant is exactly opposite to the other which has been previously in use; instead of losing its heat as it extracts the carbon it saves it, and utilizes it in an electric plant which can supply the power for drilling wells. In addition to this enormous advantage it extracts all of the carbon, leaving no heavy black smoke; in fact, it leaves no smoke at all. Experts here believe that it will revolutionize the carbon black industry.

Want Officers

Cheyenne, Wyo.—Representatives of the Cheyenne Chamber of Commerce are making an effort to have the Denver offices of the Midwest Refining Company moved to Cheyenne.

Conservation Through Legislative Control Not Possible

(Continued from page 26)

lent: That all of the oil producing States, or the five of largest production, shall have passed laws providing for commissions to conserve the oil; that these laws are wise and have performed the seemingly impossible task of giving to the commissions the essential absolute control over production, and yet left ample room for exercise of initiative and ingenuity by the operator—also essentials in this business; that they have not frightened capital, although they may regulate or prohibit its expenditure; that the commissioners are all men of fine character and ability, thoroughly conversant with the oil business, its requirements, and the needs of the public, and are wise and fair in all their rulings; that the commissions of all of the States have consulted and agreed upon, and are carrying out in good faith, a uniform and wise plan to conserve the oil. What would be the effect of a perfect conservation of our petroleum resources? The result would be utterly inadequate to protect the public, if the exhaustion of our petroleum resources is to come *soon.*

"Soon," in this connection, certainly means within a few years. Suppose we take six years as the period in which oil would be exhausted under present practices. I take this because it comports somewhat with the conclusions (stated to be theoretical and to cover only known deposits) of the Federal Oil Conservation Board; though not exactly, because when its conclusions were made, evidently there were not taken into consideration the oil deposits later discovered in the Seminole area and in West Texas, or the increasing consumption following such discoveries.

I do not know how much of the oil the conservationists expect the industry to conserve, but I suggest 25 per cent; surely this is liberal.

Therefore, if under present practices the petroleum would play out in six years and under perfect conservation the industry could supply the needs of the public with 75 per cent of the quantity it now consumes, the only effect would be that the petroleum would not be exhausted for eight years. Of course this is a speculation. Based as it is upon an estimate that, with all due respect, from the very nature of the problem, could only have been a guess, it can not be anything else. But the point is that, if the exhaustion of petroleum is to come soon—and that is the sole basis for suggestion that government should control its production—you may take any limited number of years as the duration under present practices of these supplies, and give effect to any possible saving that may be accomplished under perfect conservation, and all that you will have accomplished is to add a further very brief period before the public will lack for oil.

If our general industries will soon be unable to get their refined oils, is the material point to them whether that deprivation shall come in five years or in six years? If the public will soon be unable to get its gasoline, is the important question to it whether that inability shall come in six years or in eight years? If our nation is soon to be imperiled for lack of gasoline, is the important point to it to consider how to prolong the time in which its safety will continue from eight years to ten or eleven years?

To protect the public against a lack of oils the government should demonstrate, by experimentation, that they can be extracted, at a reasonable cost, from the shales, coal, and lignite.

I think all of us should cease efforts for restraint by law of production of oil, or its control or regulation by commission or other governmental agency. This is no solution of the problem. Respectfully, I suggest that those in high office, responsible for the safety of the nation, should cease to endeavor to assure such security for trivial additional periods. The important point in the interest of the nation and of the public is to provide, not for a short time, but for an indefinite time—practically for all time—against a lack of essential oils.

Shales, Coal and Lignite

I understand there is no doubt that these oils can be secured from the shales, coal, and lignite, fortunately in abundance. In this regard those best posted seem to be positive, as also that this can be done at a reasonable cost. Of course I do not know—probably no one knows—the exact cost. I judge there is no warrant to believe that the oils can be extracted from these substitutes as cheaply as from petroleum. A fair surmise is that the public would have to pay a higher price, but that the price that it would pay, for example, for gasoline made from these substitutes, would represent no larger increase over the 1913 price than the average commodity used by the public has had.

This experimentation should be made at once and of course by the government. The public would be far better satisfied with the results obtained by its own agents than by any one else. There should be selected for this experiment that substitute for petroleum that its technologists deem the most promising. This experimentation should be of sufficient size and duration to demonstrate its success, the feasibility of procuring the substitute from which the oil is made—waste areas of which the government now owns—and the costs of such extraction. The oils obtained should be submitted to every theoretical and practical test to determine that they can be used for all the purposes for which refined oils are now used. If the test of the substitute selected shall not be satisfactory, make the same practical experiment with the other substitutes until it shall be conclusively demonstrated that there will be no lack of oils, even if petroleum should be exhausted.

This would involve a considerable expense. I do not know how much, but it would be moderate and clearly warranted by the importance of this problem, in view of the great benefit to the people and to the various industries using oils, if there could be laid at rest for all time the anxiety that they may lack for oils. More important than this, we would know—from actual demonstration—exactly what we are doing. If this demonstration should be successful as the leaders of the oil industry are confident would be the case, that industry could go on as other industries, unfettered by any governmental control. If it should be unsuccessful, we would know what we are doing, and could proceed by amendment to the constitution of the United States, or otherwise, to protect ourselves, as best we can, against a lack of oils.

Conservation

The positions I have taken in the foregoing are:

First, that under our system of dual governments the only possible control by the government over the production of oil is through State commissions; that such plan of control is unworkable, and will not effect any conservation.

Second, that, if the exhaustion of petroleum is to come within a few years, the most perfect plan of conservation conceivable would only add to the short duration of our oil supplies a further briefer period; that this would be utterly inadequate as a remedy—indeed, no remedy at all—to protect the interests of the public, which is to get its needed oils for a long future period.

And, third, that assurance of this can be secured through demonstration by the government that, if all of the petroleum should be exhausted, the public could get its oils from shales, coal, and lignite, at reasonable prices.

However, if it should be conceded that our oil resources will not play out soon—that is, that they will last for a considerable time, say 50 years, no one would contend that it was not worth an earnest effort to add 10 to 15 years to their duration. This concession would be a complete answer to my second objection above. Likewise it would be a complete answer to this agitation for governmental control over the production of oil, for it would satisfy all reasonable citizens that there is no emergency demanding this control. They would be content for some time, to let the oil industry work out this problem.

This concession would not satisfy my

first objection above. I would still be of opinion that no effectual conservation could be secured through control by State commissions, and this is all that this agitation could lead to. But this question, for the present, would be moot. It would not become one demanding answer until after the industry should have shown its inability to solve this problem, and the public should have determined it necessary to intervene in protection of its own interests.

But I am unwilling that the reader may get an erroneous impression that I am opposed to conservation of our oil resources. As stated, I think the only absolute protection to the public against a danger of lack of oils is for the government to demonstrate that they can be gotten from the shales, coal, or lignite; but unless and until this be done, of course it is necessary to guard against that danger, as best we can, by conserving our petroleum resources as far as is practical. To my mind conservation does not imply non-use, but use of the natural resources to the extent necessary to supply the needs of the public. That amount necessary to supply these needs is to be determined, not by the minimum that the utmost endeavor would require, but by the amount necessary to be used practically to supply them. I illustrate this by considering the principal charge of waste against the industry. This is the consumption as fuel of any products from which gasoline can be extracted. The art of refining has so progressed that, through repeated use of the cracking process, nearly the whole barrel of crude can be converted into gasoline. But this repeated use is very expensive, and there comes a period in these operations when it costs more to extract further gasoline than the latter would sell for. The refinery can not go on extracting gasoline at a loss, for this would make it impossible for it to continue in business. It can not store the residuum indefinitely—the idle capital in this residuum and its containers making this impossible—consequently it sells the residuum as fuel oil. This is the only way that the business can be conducted. The refinery should not be expected, at a loss, to extract all of the gasoline possible in order to lessen the amount of crude it consumes. To demand this is not to demand conservation; it is to demand an impossibility.

The art of extracting all of the gasoline from the crude has been developed in the last few years in a very high degree; for the present probably nothing more in that way can be done. Possibly the costs of its extraction may be later reduced; I have no doubt that every refinery is trying to accomplish this. The importance of this upon the problem of the possibility of the exhaustion of our petroleum resources is that the ability to extract further gasoline more cheaply would lead to the consumption of less crude by our refineries and I think here lies the hope in this regard for conservation of our oil resources. This would be practical conservation, resulting simply from the operation of economic law.

There are other suggestions urged as measures of conservation. One might be called the oil gas ratio plan of producing oil. In its briefest terms it would prohibit the escape of gas from an oil well and compel the re-utilization of the gas as a means of extracting oil. Another is the unit plan of operation that contemplates fewer wells to get the oil from a given area, and greater conservation of the gas as the agent to raise the oil. For both the essential claim is that the industry would get more oil. To these plans there occur to me two objections that I think are worthy of consideration:

The first is that while it is obviously to the advantage of the industry to get more oil at the same cost or the same amount of oil at a less cost, are these measures to *conserve* it? Under present practices only about 20 per cent of the oil is produced, the balance remaining in the ground. Many in this industry, looking far into the future, have considered this balance as a reserve that could be drawn upon if there should be any necessity to secure it. While not fully proven, yet experiments strongly indicate that after the field is abandoned the operator can go back, and by closing all except a few wells, and injecting air in some instances, water in others, recover a considerable part of the remaining oil. Now, under the oil and gas ratio and unit operation plans, both also experimental as yet, I understand it to be claimed that as much as 40 per cent of the oil can be extracted. Therefore the question in connection with the problem we are considering is this: Is it wise to extract the further quantity now or leave it in the safest of all reservoirs, with the chance of extracting it later on at a much increased cost. It would be to the advantage of the industry to get it now, but what is to the interest of the public and the nation? My opinion is that if the government will demonstrate ability to get our oils from substitutes, the danger of lack of them being removed, the operators could adopt such methods, if then satisfied that they are efficient. Indeed, there would probably be no power to prohibit their voluntary adoption. But until this demonstration shall be made, it seems to me it would be inadvisable for any branch of the government to recommend them, and certainly unwise to try to compel their use.

Enforcement of Rules

The second objection is that both the oil-gas ratio and unit operation plans call for the passage of some law or creation of some commission to enforce them. I think the industry is now fettered with too many laws. For example, take the oil-gas ratio plan. No one should wish to compel, no legislature would compel, its adoption until well proven. Then there will be a force compelling its immediate adoption—that is, the self-interest of the producer. It is incredible that any producer would fail to adopt any method as to which it shall have been proven that it will produce more oil, and more profitably, than under present practices. Further, I think there is now ample law to compel its adoption when proven. A lessee is under obligation to operate the lease with skill. This obligation remains fixed, but the degree of skill required increases with the development of the art. When it shall be proven that under a new method the lease can be made to produce more oil, and yet the operation be as profitable, the lessee must use it. His failure to do so may forfeit his lease. I have heard it urged that lessors would not enforce this duty as they wish quick and large production, and would favor the use of all of the gas to lift as much oil as possible, as quickly as possible. Lessors will learn; they will not prefer to receive half a cake in one hour to a whole cake in two hours. Besides, it seems to me that the power to compel the use of the later and more profitable method of producing oil would not be confined to the lessor. I think this could be compelled by the owner or lessee of any adjacent property by injunction against the operator following the old method proven to be wasteful. Of course there is no precedent for such an injunction, but we need none, as it is the delight of equity to find a remedy for every wrong.

This would be the case: Assume the art of producing oil so developed that it could be proven that more oil could be extracted, and more profitably, by the re-utilization of the gas than by allowing it to escape from the well naturally; one operator refuses to follow such improved practice; assume further it could be proven that the waste of gas by that operator will keep the other from getting as much oil from their property as they could do if the recalcitrant operator should conserve the gas. It would require no proof of how much oil the complainant would be prevented from producing, but merely that his total output would be materially lessened because of the conduct of such recalcitrant. Upon the principle that no one can use his property in a manner that will injure the rights of his neighbor, it seems to me that the injunction should issue to prevent the waste of gas.

With respect to the unit plan of operation, that contemplates grouping of leases and the drilling of fewer wells. My surmise is that, if it shall be proven to be the desirable method of operation, the industry will not need new laws so much as new leases, so that the lessees may have the unquestioned right to adopt it.

Makes System Too Rigid

There is another reason why I think it would be unwise to compel by statute the adoption of any new method of producing oil, no matter how confident its advocates may be of its soundness. It makes a system too rigid. Thus, suppose Oklahoma by statute compels operation under an oil-gas ratio, either fixed in the law itself or by a commission, and a better method should be found. The predicament then of the industry would be very serious. It would have substituted for the present wise rule that the lessee must operate skillfully, under which he would be required to use such better method as soon as it should be proven, a hard and fast statute compelling adherence to the oil-

gas ratio. The lessee could not adopt the better method without violating the law; obviously neither the lessor nor any lessee on adjacent property could compel him to do this. In an industry so rapidly developing, with useful innovations so frequent, is it wise to bind it with fetters that can be unloosed only at the pleasure of the legislature? Are the operators content that the methods of producing oil shall be determined, not as heretofore by them, spurred by the attractiveness and opportunities of the game to the exercise of the highest ingenuity, in a field that permits its very wide exercise—but by legislatures, whose entire honesty may be readily conceded, as their complete ignorance of the art is not to be doubted. Yet this predicament would come unless we assume—and be correct in assuming—that the industry now knows it all, and that hereafter there can be no possible improvement in the methods of producing oil. Let all improved processes to extract oil from the ground or to lessen the cost of its production, or to stabilize the production, come, and adopt them when they come, but do not attempt to force such adoption by compulsion; let it be natural as other improvements have been adopted in an industry in which the fullest freedom of individual effort has resulted in the quickest great business development ever known. But, above all, do not bind and fetter it by a lot of laws, rules, regulations, and orders. These will destroy the very force that has made it great.

However, I think much can be done, and should be done, not by legal restraint, but through voluntary, intelligent conduct of the producers:

Through agreements to restrict production in developed fields.

Considerable has been done in this regard, and much more will be done, I think, when a continuance of over-production shall force the industry to a more full realization of the condition confronting it, and when financial statements indicate constantly decreasing profits or increasing losses. Then I think there will be less lack of faith that the others will comply with these agreements, more willingness to risk the loss of some oil in a particular field in order to get the benefit accruing to the general markets through restriction of production, and more disposition to act sensibly to avoid a common disaster.

Through agreements to withhold production where mere discovery but no substantial development has been had.

More can be done in this way, for I am told that in most of these embryonic fields there are only a few interested. To develop them, especially those in West Texas, and sell the crude at present prices, which a short delay may double, is so unbusinesslike as to warrant the belief that their production may be withheld. I take it the chief difficulty will be the demands of the landowners for development. Certainly the legislature of Texas should be requested to modify the drilling requirements in leases on University and State lands; certainly also congress should give to the Secretary of the Interior a discretion to withhold leasing and drilling. If the individual landowner can not be persuaded that delay will be to his interest, possibly it can be procured through some plan of advance payments against royalties to accrue.

In my judgment, the greatest obstacle to restricting production and development is the anti-trust laws. This I shall discuss later.

Through further use of scientific means to find oil and improvements in appliances for deeper drilling.

This can not be properly classed as a suggestion for conservation, but it would accomplish the same purpose, if we could increase our knowledge of the existence of oil deposits and our ability to secure them. In the last few years science has played a large part in the finding and production of oil. A monopoly might suppress a scientific invention or discovery by refusing to use it; but in a highly competitive industry this is impossible. Since it will be used by some, it must be used by all, to give equal opportunity in the competition. Since the entire industry will avail itself of the aids that science can give, my thought is that it should be used to the greatest possible extent. By increase in our knowledge of geology and perfection of our geophysical appliances, oil has been found at many places and at depths before unknown. Further advance in these regards will add greatly to our knowledge concerning the amount of our petroleum resources, and increase our ability to get them when needed. Better machinery and better and stronger casing will enable the industry to reach much lower depths. By improvements in this way we may hasten the day when a dry hole will be a mute evidence of the stupidity of the operator in drilling without seeking scientific advice, or that such advice as he sought was incompetent. Again, there may be perfected some form of core drilling for prospecting of large areas cheaper and more rapidly than is now done by ordinary wells. The immediate benefit of such advancements in the art would inure to the industry; but the expense of producing oil enters into the price the public pays, and any economies that can be made benefit the public.

A Plea for the Oil Industry

Let us first determine whether its record of achievement is commendable. Reports of the Department of Labor show the prices in 1926 for the quantities that could be purchased for $1.00 in 1913, of these commodities:

House furnishings	$2.28
Bituminous coal	2.05
Brick	2.04
Woolens and worsteds	1.94
Lumber	1.85
Boots and Shoes	1.85
Building materials	1.63
Cotton goods	1.60
Foods	1.55
Meats	1.53
Grains	1.48
Farm products	1.42
Structural steel	1.35

These reports do not show the comparative price of gasoline in the years referred to, but the Year Book of the Department of Commerce for 1925 shows a cost of $1.06 for the quantity of gasoline that $1.00 would buy in 1913.

Frequently we see statements, put alarmingly, in the press and from our public men concerning the production of oil, and complaining of the industry that it does not stop the same. This is most unfair. Can you think of any way to lessen production, except by agreements among the operators not to drill wells, or not to produce oil therefrom? Yet in most of the States of oil production—I think in all of them—there are laws forbidding this. For example, those in Texas forfeit the charters and impose very large fines upon the corporations, and such fines and penal sentences upon the individuals, who make agreements "to limit the output of any article that may be mined or produced." Before the public complains that the industry does not restrict the production of oil, it should permit the latter to adopt the only means by which this can be done.

Anti-trust laws are based upon sound propositions that low prices benefit the public, and that they can be assured only through the maintenance of competition; therefore they wisely prohibited the stifling of competition. But the test generally prescribed in these statutes for their application is the effect of the agreement upon the consumer. If the price to the latter is increased, the agreement is condemned. This test is too narrow; its application often destroys the very competition that these laws are designed to assure. Obviously the true interest of the consumer is to continue the competition, for through that means only can he be assured of low prices. But the stifling of competition by agreement is not the only means of destroying it. Bankruptcy—that is, the inability of some of the competitors to continue in business—will just as effectually destroy competition. Hence those trade agreements that are essential to permit the competitors to continue in business and to continue to compete, are to the benefit, not to the detriment, of the public, and, although they may raise the price to the public, they should be upheld in its interest. This is the rule in every other English speaking country. It is to be hoped that the rule of reason laid down by the Supreme Court may presage its adoption here.

In its report the Federal Oil Conservation Board says that these anti-trust laws have served "as an actual or imagined or pretended barrier to co-operative action to limit oil production." I do not doubt that there are instances in which these statutes serve as an excuse, unanswerable, for the refusal to enter into these agreements by some, who could otherwise be persuaded to fair and considerate conduct. But in the majority of instances these anti-trust laws are neither imaginary nor pretended barriers. I doubt if there be any lawyer connected with this industry who would advise entry into agreements in conflict with the letter of these laws. The executives—who in these days are seldom the owners—of the companies always hesitate, and often refuse, to assume the risk of making such agreements.

Up to the Public

The truth is that the politicians have made it almost impossible for the industry to do anything to protect itself or the public. In strict justice the next move is up to the public, though no one would advise, until that move shall be made, delaying the doing of anything that the industry can do. But the oil industry has

first objection above. I would still be of opinion that no effectual conservation could be secured through control by State commissions, and this is all that this agitation could lead to. But this question, for the present, would be moot. It would not become one demanding answer until after the industry should have shown its inability to solve this problem, and the public should have determined it necessary to intervene in protection of its own interests.

But I am unwilling that the reader may get an erroneous impression that I am opposed to conservation of our oil resources. As stated, I think the only absolute protection to the public against a danger of lack of oils is for the government to demonstrate that they can be gotten from the shales, coal, or lignite; but unless and until this be done, of course it is necessary to guard against that danger, as best we can, by conserving our petroleum resources as far as is practical. To my mind conservation does not imply non-use, but use of the natural resources to the extent necessary to supply the needs of the public. That amount necessary to supply these needs is to be determined, not by the minimum that the utmost endeavor would require, but by the amount necessary to be used practically to supply them. I illustrate this by considering the principal charge of waste against the industry. This is the consumption as fuel of any products from which gasoline can be extracted. The art of refining has so progressed that, through repeated use of the cracking process, nearly the whole barrel of crude can be converted into gasoline. But this repeated use is very expensive, and there comes a period in these operations when it costs more to extract further gasoline than the latter would sell for. The refinery can not go on extracting gasoline at a loss, for this would make it impossible for it to continue in business. It can not store the residuum indefinitely—the idle capital in this residuum and its containers making this impossible—consequently it sells the residuum as fuel oil. This is the only way that the business can be conducted. The refinery should not be expected, at a loss, to extract all of the gasoline possible in order to lessen the amount of crude it consumes. To demand this is not to demand conservation; it is to demand an impossibility.

The art of extracting all of the gasoline from the crude has been developed in the last few years in a very high degree; for the present probably nothing more in that way can be done. Possibly the costs of its extraction may be later reduced; I have no doubt that every refinery is trying to accomplish this. The importance of this upon the problem of the possibility of the exhaustion of our petroleum resources is that the ability to extract further gasoline more cheaply would lead to the consumption of less crude by our refineries and I think here lies the hope in this regard for conservation of our oil resources. This would be practical conservation, resulting simply from the operation of economic law.

There are other suggestions urged as measures of conservation. One might be called the oil gas ratio plan of producing oil. In its briefest terms it would prohibit the escape of gas from an oil well and compel the re-utilization of the gas as a means of extracting oil. Another is the unit plan of operation that contemplates fewer wells to get the oil from a given area, and greater conservation of the gas as the agent to raise the oil. For both the essential claim is that the industry would get more oil. To these plans there occur to me two objections that I think are worthy of consideration:

The first is that while it is obviously to the advantage of the industry to get more oil at the same cost or the same amount of oil at a less cost, are these measures to *conserve* it? Under present practices only about 20 per cent of the oil is produced, the balance remaining in the ground. Many in this industry, looking far into the future, have considered this balance as a reserve that could be drawn upon if there should be any necessity to secure it. While not fully proven, yet experiments strongly indicate that after the field is abandoned the operator can go back, and by closing all except a few wells, and injecting air in some instances, water in others, recover a considerable part of the remaining oil. Now, under the oil and gas ratio and unit operation plans, both also experimental as yet, I understand it to be claimed that as much as 40 per cent of the oil can be extracted. Therefore the question in connection with the problem we are considering is this: Is it wise to extract the further quantity now or leave it in the safest of all reservoirs, with the chance of extracting it later on at a much increased cost. It would be to the advantage of the industry to get it now, but what is to the interest of the public and the nation? My opinion is that if the government will demonstrate ability to get our oils from substitutes, the danger of lack of them being removed, the operators could adopt such methods, if then satisfied that they are efficient. Indeed, there would probably be no power to prohibit their voluntary adoption. But until this demonstration shall be made, it seems to me it would be inadvisable for any branch of the government to recommend them, and certainly unwise to try to compel their use.

Enforcement of Rules

The second objection is that both the oil-gas ratio and unit operation plans call for the passage of some law or creation of some commission to enforce them. I think the industry is now fettered with too many laws. For example, take the oil-gas ratio plan. No one should wish to compel, no legislature would compel, its adoption until well proven. Then there will be a force compelling its immediate adoption—that is, the self-interest of the producer. It is incredible that any producer would fail to adopt any method as to which it shall have been proven that it will produce more oil, and more profitably, than under present practices. Further, I think there is now ample law to compel its adoption when proven. A lessee is under obligation to operate the lease with skill. This obligation remains fixed, but the degree of skill required increases with the development of the art. When it shall be proven that under a new method the lease can be made to produce more oil, and yet the operation be as profitable, the lessee must use it. His failure to do so may forfeit his lease. I have heard it urged that lessors would not enforce this duty as they wish quick and large production, and would favor the use of all of the gas to lift as much oil as possible, as quickly as possible. Lessors will learn; they will not prefer to receive half a cake in one hour to a whole cake in two hours. Besides, it seems to me that the power to compel the use of the later and more profitable method of producing oil would not be confined to the lessor. I think this could be compelled by the owner or lessee of any adjacent property by injunction against the operator following the old method proven to be wasteful. Of course there is no precedent for such an injunction, but we need none, as it is the delight of equity to find a remedy for every wrong.

This would be the case: Assume the art of producing oil so developed that it could be proven that more oil could be extracted, and more profitably, by the re-utilization of the gas than by allowing it to escape from the well naturally; one operator refuses to follow such improved practice; assume further it could be proven that the waste of gas by that operator will keep the other from getting as much oil from their property as they could do if the recalcitrant operator should conserve the gas. It would require no proof of how much oil the complainant would be prevented from producing, but merely that his total output would be materially lessened because of the conduct of such recalcitrant. Upon the principle that no one can use his property in a manner that will injure the rights of his neighbor, it seems to me that the injunction should issue to prevent the waste of gas.

With respect to the unit plan of operation, that contemplates grouping of leases and the drilling of fewer wells. My surmise is that, if it shall be proven to be the desirable method of operation, the industry will not need new laws so much as new leases, so that the lessees may have the unquestioned right to adopt it.

Makes System Too Rigid

There is another reason why I think it would be unwise to compel by statute the adoption of any new method of producing oil, no matter how confident its advocates may be of its soundness. It makes a system too rigid. Thus, suppose Oklahoma by statute compels operation under an oil-gas ratio, either fixed in the law itself or by a commission, and a better method should be found. The predicament then of the industry would be very serious. It would have substituted for the present wise rule that the lessee must operate skillfully, under which he would be required to use such better method as soon as it should be proven, a hard and fast statute compelling adherence to the oil-

gas ratio. The lessee could not adopt the better method without violating the law; obviously neither the lessor nor any lessee on adjacent property could compel him to do this. In an industry so rapidly developing, with useful innovations so frequent, is it wise to bind it with fetters that can be unloosed only at the pleasure of the legislature? Are the operators content that the methods of producing oil shall be determined, not as heretofore by them, spurred by the attractiveness and opportunities of the game to the exercise of the highest ingenuity, in a field that permits its very wide exercise—but by legislatures, whose entire honesty may be readily conceded, as their complete ignorance of the art is not to be doubted. Yet this predicament would come unless we assume—and be correct in assuming—that the industry now knows it all, and that hereafter there can be no possible improvement in the methods of producing oil. Let all improved processes to extract oil from the ground or to lessen the cost of its production, or to stabilize the production, come, and adopt them when they come, but do not attempt to force such adoption by compulsion; let it be natural as other improvements have been adopted in an industry in which the fullest freedom of individual effort has resulted in the quickest great business development ever known. But, above all, do not bind and fetter it by a lot of laws, rules, regulations, and orders. These will destroy the very force that has made it great.

However, I think much can be done, and should be done, not by legal restraint, but through voluntary, intelligent conduct of the producers:

Through agreements to restrict production in developed fields.

Considerable has been done in this regard, and much more will be done, I think, when a continuance of over-production shall force the industry to a more full realization of the condition confronting it, and when financial statements indicate constantly decreasing profits or increasing losses. Then I think there will be less lack of faith that the others will comply with these agreements, more willingness to risk the loss of some oil in a particular field in order to get the benefit accruing to the general markets through restriction of production, and more disposition to act sensibly to avoid a common disaster.

Through agreements to withhold production where mere discovery but no substantial development has been had.

More can be done in this way, for I am told that in most of these embryonic fields there are only a few interested. To develop them, especially those in West Texas, and sell the crude at present prices, which a short delay may double, is so unbusinesslike as to warrant the belief that their production may be withheld. I take it the chief difficulty will be the demands of the landowners for development. Certainly the legislature of Texas should be requested to modify the drilling requirements in leases on University and State lands; certainly also congress should give to the Secretary of the Interior a discretion to withhold leasing and drilling. If the individual landowner can not be persuaded that delay will be to his interest, possibly it can be procured through some plan of advance payments against royalties to accrue.

In my judgment, the greatest obstacle to restricting production and development is the anti-trust laws. This I shall discuss later.

Through further use of scientific means to find oil and improvements in appliances for deeper drilling.

This can not be properly classed as a suggestion for conservation, but it would accomplish the same purpose, if we could increase our knowledge of the existence of oil deposits and our ability to secure them. In the last few years science has played a large part in the finding and production of oil. A monopoly might suppress a scientific invention or discovery by refusing to use it; but in a highly competitive industry this is impossible. Since it will be used by some, it must be used by all, to give equal opportunity in the competition. Since the entire industry will avail itself of the aids that science can give, my thought is that it should be used to the greatest possible extent. By increase in our knowledge of geology and perfection of our geophysical appliances, oil has been found at many places and at depths before unknown. Further advance in these regards will add greatly to our knowledge concerning the amount of our petroleum resources, and increase our ability to get them when needed. Better machinery and better and stronger casing will enable the industry to reach much lower depths. By improvements in this way we may hasten the day when a dry hole will be a mute evidence of the stupidity of the operator in drilling without seeking scientific advice, or that such advice as he sought was incompetent. Again, there may be perfected some form of core drilling for prospecting of large areas cheaper and more rapidly than is now done by ordinary wells. The immediate benefit of such advancements in the art would inure to the industry; but the expense of producing oil enters into the price the public pays, and any economies that can be made benefit the public.

A Plea for the Oil Industry

Let us first determine whether its record of achievement is commendable. Reports of the Department of Labor show the prices in 1926 for the quantities that could be purchased for $1.00 in 1913, of these commodities:

House furnishings	$2.28
Bituminous coal	2.05
Brick	2.04
Woolens and worsteds	1.94
Lumber	1.85
Boots and Shoes	1.85
Building materials	1.63
Cotton goods	1.60
Foods	1.55
Meats	1.53
Grains	1.48
Farm products	1.42
Structural steel	1.35

These reports do not show the comparative price of gasoline in the years referred to, but the Year Book of the Department of Commerce for 1925 shows a cost of $1.06 for the quantity of gasoline that $1.00 would buy in 1913.

Frequently we see statements, put alarmingly, in the press and from our public men concerning the production of oil, and complaining of the industry that it does not stop the same. This is most unfair. Can you think of any way to lessen production, except by agreements among the operators not to drill wells, or not to produce oil therefrom? Yet in most of the States of oil production—I think in all of them—there are laws forbidding this. For example, those in Texas forfeit the charters and impose very large fines upon the corporations, and such fines and penal sentences upon the individuals, who make agreements "to limit the output of any article that may be mined or produced." Before the public complains that the industry does not restrict the production of oil, it should permit the latter to adopt the only means by which this can be done.

Anti-trust laws are based upon sound propositions that low prices benefit the public, and that they can be assured only through the maintenance of competition; therefore they wisely prohibited the stifling of competition. But the test generally prescribed in these statutes for their application is the effect of the agreement upon the consumer. If the price to the latter is increased, the agreement is condemned. This test is too narrow; its application often destroys the very competition that these laws are designed to assure. Obviously the true interest of the consumer is to continue the competition, for through that means only can he be assured of low prices. But the stifling of competition by agreement is not the only means of destroying it. Bankruptcy—that is, the inability of some of the competitors to continue in business—will just as effectually destroy competition. Hence those trade agreements that are essential to permit the competitors to continue in business and to continue to compete, are to the benefit, not to the detriment, of the public, and, although they may raise the price to the public, they should be upheld in its interest. This is the rule in every other English speaking country. It is to be hoped that the rule of reason laid down by the Supreme Court may presage its adoption here.

In its report the Federal Oil Conservation Board says that these anti-trust laws have served "as an actual or imagined or pretended barrier to co-operative action to limit oil production." I do not doubt that there are instances in which these statutes serve as an excuse, unanswerable, for the refusal to enter into these agreements by some, who could otherwise be persuaded to fair and considerate conduct. But in the majority of instances these anti-trust laws are neither imaginary nor pretended barriers. I doubt if there be any lawyer connected with this industry who would advise entry into agreements in conflict with the letter of these laws. The executives—who in these days are seldom the owners—of the companies always hesitate, and often refuse, to assume the risk of making such agreements.

Up to the Public

The truth is that the politicians have made it almost impossible for the industry to do anything to protect itself or the public. In strict justice the next move is up to the public, though no one would advise, until that move shall be made, delaying the doing of anything that the industry can do. But the oil industry has

the right to demand that the public shall treat it fairly. Let not the public, or its representatives, threaten this industry with asphyxiation, through control by State commissions, if it shall not restrict production, and continue to hold over it the menace of corporate deaths and felons' punishments, if it shall adopt the only possible means to restrict production.

Recently the press carried an interview with Secretary Hoover, for whom I have the highest respect, as have all of the people. He calls upon the "doctors of law" to show the way out. If a connection as a lawyer for many years with this industry would include me within such distinguished appellation, I am pleased to respond to this call. The way out, Mr. Secretary, does not lie through further restraints, but through more freedom to the industry. Freedom to protect itself and to protect the public. This freedom the industry can not secure through any effort of its own. It is the least understood and most unpopular of all the industries. For it to attempt to get this freedom, in my opinion, would be so absolutely hopeless that I would not recommend that the attempt be made. This freedom must come through the pressure of public opinion. Our public men, our leaders of thought, must convince the public that it is absolutely necessary, in its own interest, that this freedom be granted. The Federal Oil Conservation Board, I think, should take the lead in saying to congress and to the legislatures that the anti-trust laws must be so amended at once as to permit the oil industry, through agreements, to restrict production of oil, and that this is essential in the interests of the public. If you please, let your recommendation be to confine the operation of these agreements to the times when the production of oil shall be in excess of the market's requirements. I am unable to conceive of any way in which the exercise of such a right could be made a means to oppress the public. The Federal Oil Conservation Board has said that the oil industry should regulate itself; this was just, fair, and proper. It has never had a fair chance to do so; I fear it will never have this chance so long as there hangs over it the menaces of these anti-trust laws.

Waste in Selling

Further, these anti-trust laws drive the industry to its largest waste—also referred to in the interview of Secretary Hoover. This is the multiplication of filling stations. It does seem silly to find six or more filling stations in a hamlet whose consumption of gasoline would not support one. But the industry is impotent to prevent this. Automobiles generally are filled at these stations. To sell its gasoline for this principal consumption, each company must establish these stations. It would be delighted to find some territory unoccupied by these stations. There is none such. Consequently each goes into each town, village, or hamlet, and this waste occurs—that, of course, the public finally pays in the price of the gasoline it buys. The only way to avoid this would be to permit the companies to agree upon a division of territory. Much of this waste could be avoided, even if such permission was so limited as to require two stations in each place to assure a continuance of competition. But no company in this nation would dare to make these agreements, no matter how limited. The anti-trust laws forbid. I see no hope to avoid the continuance of this large waste, unless, at some distant date, the public may realize that over-competition is nearly as hurtful to its interests as the entire lack of competition. But again I ask, is it fair to condemn an industry for waste, and yet deny to it the only means to avoid that waste?

How the Exhaustion of Oil Would Come, If it Shall Ever Come

Fortunately there is in this oil situation a strong factor of safety. This is that nothing serious can happen *suddenly*. There can never come a time when on one day the public's needs for refined oils shall be fully supplied and on the next day there shall be no oils. I believe that if the exhaustion of petroleum shall ever come, it will come gradually—so gradually that the public will never lack for oil. No oil field blows up or suddenly ceases altogether to produce. There is always a gradual decline—in most fields a very slow decline—extending through many years. There are wells still producing that were brought in 30 or more years ago. The coming exhaustion would be indicated long before its arrival by the failure to find new fields and the gradual decrease of production in the discovered ones. No one who reads the newspapers would lack knowledge that such exhaustion is coming long before it shall come. This would be indicated by the increasing price of oils, due to their scarcity. These increasing prices would make possible the most extended use of the cracking process, with result that virtually the whole barrel of crude would be converted into gasoline, and consequently it would take less oil to satisfy the public's requirements. The increased price of gasoline would cause the public to demand motors using less gasoline. These the automobile makers can and would supply, and hence there would follow a decreased consumption of gasoline. As the exhaustion would increase the companies would go to the use of the substitutes. This change to the substitutes would not be made by all of the companies at the same time, for some have much larger petroleum resources in the ground than have others. Nor would any company at any particular time switch its entire operations from petroleum to a substitute; nor, probably, would all the companies use the same substitute. Plainly, what would happen would be that as each concern should find itself unable to get petroleum to supply its requirements, it would use some substitute to make up the deficiency, enlarging this use in the degree that the inability may increase. Some might use as a substitute the shales, others coal, others lignite; this would depend entirely upon what particular substitute would be most economic for it to use in the locality in which it might operate. When we consider the past record of this industry for efficiency, the tremendous importance of a correct handling of this proposition to the companies in this industry, the economic loss that a bungling conduct thereof would entail upon the stockholders; when we reflect that this is the great American business, of which all others are but copyists, and as typically American as is baseball our national sport; when we remember that it has never failed to meet every need of the public for oil, and that it is probably the only industry whose record is perfect on the supply of products during the war—does it not seem to the reader that this industry may be safely trusted to handle this proposition?

Is There Any Real Danger of Exhaustion of Our Petroleum Resources?

My belief is that we shall never lack for petroleum. It seems to me that the opinion that it will be exhausted soon is based upon fallacious reasoning. Thus, those who have this belief know each barrel of oil extracted leaves that much less in the ground; from this they reason that continued extraction will cause exhaustion. This is true, yet it is no proof that such exhaustion will come soon; it may be centuries hence. The mining of each ton of coal or copper has the same effect, and its continuance will lead to the same consequences, but with them there is no fear of exhaustion. This is because these minerals in place can be measured and the quantities ascertained. Unfortunately this can not be done with oil with any degree of accuracy. It is because the quantity that remains can not be ascertained that there arises the opinion that it will soon be exhausted. It is an opinion founded upon no proof; it is supported by no logical reasoning from any accepted premise; it originates in and is based upon fear—fear of a calamity coming to civilization— a fear grossly exaggerated, because those who have it usually do not know of the substitutes for petroleum from which could be extracted the oils needed for civilization, and of the ability of the industry to meet that contingency.

We should never expect any governmental inquiry to report the conclusive that our oil resources will not be soon exhausted. In making this statement I say sincerely that I mean no reflection upon the integrity or intelligence of those who conduct these inquiries. But they will be dealing with a quanity unknown and unknowable; they will be be deeply conscious—and properly so—of their responsibility in the inquiry and of the consequence—calamitous as they will think—that such a report, if erroneous, might entail. The very fear referred to will always cause them to report alarmingly and to counsel strongly the utmost conservation of our oil resources. They can not be expected to counsel otherwise.

No Exhaustion of Natural Resources

There have been many alarms—such

as the exhaustion of timber, sounded about 30 years ago by well-meaning theorists who were unable to visualize the era of reinforced concrete; and the exhaustion of coal, prophesied by that patriot, Mr. Roosevelt. But I recall no instance in history of the exhaustion of any natural resource. If this ever threatened, the ingenuity of man provided quickly a substitute. In the nearly 70 years of the life of the industry we have never lacked for oil. When we consider that it is now found in many places where formerly its existence was not even suspected, the vast areas unexplored for oil, our better equipment—through the advancement of geophysical science—for finding it, the ability to drill deeper, and to extract a larger percentage of the oil from the ground, and to convert practically all of the oil into gasoline, the improvements that can be made in motors, requiring less gasoline—all these reasons and others that could be mentioned, make me believe that the end of the oil industry will come, not from any exhaustion of petroleum, but from the invention or perfection of some means of producing power more cheaply than by the internal combustion engine.

Yet, after all is said, the fact remains that this exhaustion may or may not come. None of us know. All of us merely have opinions. With me the decided weight of the evidence is that it will not come. This is the belief of nearly the entire oil industry. Yet, in deference to the opinions of others—to relieve the anxiety of the public—to play safe—it seems to me plainly advisable for the government to demonstrate, through experimentation with the substitutes, that our nation and its people will never lack for oils. I wish nothing that I say to qualify my earnestness in this suggestion.

The Course the Industry Should Pursue

If my opinion be correct, that our oil resources will not be exhausted, that they will probably last longer than we shall have need for them, it seems to me that the businesslike course for the industry to pursue is to enlarge its markets, with effect to obtain better prices, and thereby insure its continued prosperity. Certainly if the government will demonstrate that needed oils can be obtained at reasonable prices from the substitues for petroleum, there could be no conceivable objection to pursuit by the industry of this course. In brief, I think the industry should make no effort to restrict by law supply to equal demand; this is an artificial means to increase prices, generally unworkable, and clearly so here; but to use the means, sound in economics, to secure that result—of increasing the demand to equal the supply. This would be through enlarging the uses of oil. I am told that this can be done through increasing its use for the heating of office buildings, hotels, homes, and by the railroads, steamships, Diesel engines, etc.

There must be a large part of our country in which oil can compete with coal for heating purposes. Oil heating is so much cleaner and quicker in operation, the oil so much more stable in quality, that I am sure that no one who has used oil would replace it with coal, unless the cost be very much less. Plainly the use of oil could be much larger by the railroads, where it is the ideal fuel, and because it is so much more easily handled it should permit a substantial saving in wages. Also oil could be used much more in steamships; there it has many advantages; it is cleaner, more quickly loaded, vessels can be supplied with fuel at sea, it save cargo space, makes it easier to prevent listing, etc. Through the perfection o fthe Diesel engine, the residual oils can now be used in the most economic manner, and the general recognition of this promises a very large increase in the demand for Diesel engine oil.

It is my understanding that the markets for such enlarged uses of oils have not been secured, chiefly because of doubt by those who would use them of the certainty of supply. It would seem that the present condition of over-production, if it shall continue so long as to be a real menace to the business as now conducted, should give the assurance necessary to permit this new business to be secured. In other words, that which now threatens the future of the industry may result to its advantage.

I think the serious objection to this suggestion to enlarge the markets and thereby increase the demand for oil, and the price thereof, is the risk involved.

Since when has it become the practice of the industry to fail to act—to cease going on—because it involves a risk? The whole business is one of risks; when a well is drilled, a pipe line built, a refinery constructed, or even when a filling station is erected. When a company pays a large sum for a property that its officers think will be productive, it risks the loss of same and the expense of exploration, if oil be not found, or if oil become so cheap as not to warrant operation of the property. The oil concern that never acts where there is a risk dies of dry rot. It is not the existence of some risk that should prevent the adoption of this suggestion; it is a question of the degree of risk. Is it so large as to be out of proportion to the advantages that success would bring?

The degree of risk depends upon whether supplies of crude will or will not continue to be large there would continue to be large, there should be no loss, for I assume that the integers of the industry would continue to exercise the good judgment that has made them successful. If the supplies do not continue to be large theer would be a heavy loss. Sometimes I think that we oil people have listened so much to conservationists that we ourselves have become obsessed with their fear-thought. I have tried to consider this subject with all of the deliberation and care of which I am capable. It is true that we are now taking out more oil than we ever did before; it is also true that if we continue to do this, the oil will be exhausted earlier than it would if we took same more slowly. But I repeat that this is no evidence that the oil will be exhausted soon. To the contrary, the great areas that are known to be oil bearing, and such large production, only indicate to my mind that our oil resources are far greater than anyone has heretofore thought. I think that the fair conclusion is that the prospects for continuance of ample oil supplies is brighter than it has ever been since Col. Drake drilled his well. I think Mr. Rockefeller and his associates, founders of this industry, in building the first refineries took chances immeasurably greater upon the continuance of an ample supply of oil than any that the industry would now take in trying to secure the enlarged markets for its oil.

The advantages that success would bring would be very great. Probably great in the earnings of the enlarged business, but of this we can not be sure. But certainly great in the continuance of the profits upon the business as now conducted. I do not think that the industry fully realizes the strong probability that over-production will last for a very long time. We are accustomed to consider overproduction as temporary, because it has heretofore been so. But I think its cause now is wholly different from what it was in any previous instance. Then such condition resulted from chance in drilling; now it has resulted from the application of science at both ends—in finding oil and in extracting the gasoline. The inventions for finding oil have been in use only a very short time; they have found oil in many places that have not been developed, through a forbearance of the companies. I see no reason to doubt that these inventions will continue to find oil for an indefinite time. Judging the future by the past—especially by the near past—it is a fair conclusion that a production in excess of the requirements of the business as now conducted will continue for a long time. Experience has shown that it is unprofitable to purchase oil and hold it in storage. The excess of crude offered for sale over the quantity desired to be bought makes certain a low price. Pipe lines and refineries will operate to full capacity to take care of the production. The execess of refinery output over the demand can not be taken care of through storage; all such output must be sold; this makes certain a low price for the finished products. This low price may mean a small profit, or no profit, or a loss; for, of course, the cost of a commodity has no control

ver the price at which it sells in a serious condition of oversupply. Therefore, if the industry could secure larger markets and by this means avoid the consequences of oversupply, obviously the advantage would be very great.

Conclusion

That he road of the oil industry will be hard for some time seems plain. But it is a sound industry, based upon a large demand for essential commodities, and that demand is constantly increasing. I share the belief of nearly the entire industry that our petroleum resources will not be exhausted, that probably they will last longer than there shall be need for the oil. Therefore, I believe that the public can rely, with confidence, upon the resourcefulness and ingenuity of the industry to continue to supply the needed oils from petroleum.

But, if this belief should be wrong, and petroleum should be exhausted. I believe the industry would withstand the blow. To that part of it that is engaged only in producing oil, some partially compensatory benefits would accrue. For with the appearance of this coming exhaustion, there would come high prices for producing properties, and for the petroleum obtained therefrom. To the part that is completely integated doing the entire business from the well to the consumer, this exhaustion would be a very violent blow. But the demand for oils would yet remain, the companies would have the business of supplying that demand; they would know where and how to get the oils from the substitutes, and the change would come so gradually as to give them ample opportunity to adjust their businesses to it. With a business in hand that could continue to be conducted profitably, certainly it would go on. To assume that the companies would lie down—quit—would be entirely inconsistent with the record of all American business men, and especially so with the records of the strong characters who have made and maintain this great industry. It could not be lack of capital that would prevent, because the industry has never lacked for capital. With our country becoming increasingly prosperous, with more and more capital seeking investment, why should we doubt that it could be procured by an industry engaged in extracting essential oils from the substitutes? This would really be a more stable industry, because the receipt of its oils would be more regular and certain, and less subject to the fluctuations incident to the business as now conducted. I do not think that any one can state any sound reason to doubt that this business would go on and supply the needs of the public with oils from the substitutes.

I do not fear that petroleum will be exhausted. I do not fear that the public will lack for oils, if it be exhausted. But I do fear one danger. This may come at any time, but probably at the next period in which the quantity of oil produced shall be less than the amount consumed, and to make up the deficiency the industry shall be drawing upon stocks of petroleum held in storage for that very purpose. There will be nothing alarming in this condition, that has often presented before and that will present again. But the danger, as I see it, is that at such a time the public already excited by the scare headlines and alarming prognostications in the newspapers, may be moved in a panic to protect itself against a danger that will not exist, but which it will believe to exist, and take the control of this situation from out of the hands of those only who will be ready and able to handle it. It is principally to this danger that this paper is addressed, in the earnest hope that it may induce some calmer, more deliberate thinking.

Roxana Plans Pipe Line From West Texas

San Angelo, Texas—Potential production held by Roxana Petroleum Corporation in the Yates and Hendricks fields on proven acreage, and joint interests held in the latter area with Landreth Production Corporation and the Llano Oil Company creates the need of a direct pipe line outlet for this West Texas production in the near future. Roxana is now shipping between 75 and 90 thousand barrels of crude monthly via tank cars from the McCamey field to its inland refineries, and must take immediate steps towards taking care of its production in Winkler County, while the Yates field production is going to Humble on the field proration plan.

Roxana is in a position to support a trunk line system out of West Texas with its own crude output, and is almost certain to take such steps in the near future as no connections are available or in sight from other carriers serving the district. Roxana's transportation subsidiary, the Ozark Pipe Line Company has a ten-inch line extending from the Healdton field, in Southern Oklahoma, to its refining plants at Arkansas City, Kansas; Wood River, Illinois, and East Chicago, Indiana. These three plants are rated at a maximum of 76,000 barrels skimming and cracking capacity daily, and properties held by Roxana in West Texas are slated to play an important role in supplying these plants with crude in future years.

The extension of the Ozark Pipe Line system from Healdton across the south plains section of Texas to Winkler County is being considered, and will afford a shorter route than taking West Texas crude to tidewater by at least 80 miles.

Roxana has maintained a big organization in West Texas for months in acquiring large blocks for prospecting, and has been the most active concern in buying working interests in wildcat drilling blocks having favorable geology. Roxana purchased a half interest in the Llano Oil Company's Scarborough block, Winkler County, last May, and a producing oil well is now in process of completion, with Roxana obligated to provide a market for the oil. Roxana purchased a half interest in about 1,360 acres of checkerboard leases held by the Landreth Production Corporation in and around the Hendricks field late last month, paying $725,000 cash and $100,000 additional out of oil, besides assuming half the cost of the tests now drilling. Roxana is to take care of its portion of the production, while Landreth has a contract to dispose of its output to Southern Crude Oil Purchasing Company. Roxana recently acquired a half-interest in the Kirby Petroleum Company's wildcat drilling block on the W. W. Turney ranch, Pecos County, paying $40,000. Roxana has 2,500 barrels of settled production in the McCamey field.

New Mexico Wildcat Linked with West Texas

Tulsa.—The Texas Company's successful wildcat strike in its Rhodes 1, located in section 22-26 south 37 east, Lea County, New Mexico, stands out as having unusual importance in the part it plays in connecting up the production links running northwest from the Crane-Upton County field toward Artesia field, New Mexico. Opinions in the Mid-Continent area are that this wildcat strike serves to come in as a missing link in production along the northwesterly trending structure, which has for some time offered indications of making connections between the various pools.

Rhodes 1 is approximately six miles north of Roxana Petroleum Corporation's Llano 1, which was last week showing up for a producer, in which event another pool would be contributed to Winkler County, Texas. The Roxana well is roughly nine miles north of the Hendricks pool of Winkler County. Rhodes 1 is located to the south and slightly east of the Maljamar pool, which is east and slightly south of the Artesia field, New Mexico.

Tulsa.—Kewanee Oil Company's No. 4, in the southeast of the southwest of the northeast of section 3-26-6, in the vicinity of George Parker's No. 1, which extended Burbank field one-half mile east six weeks ago, made 15 barrels an hour October 12 from 2775-2812 feet. Kewanee's No. 3, completed a week previously in the southwest of the southeast of the northeast of section 3, was making 55 barrels an hour October 12 from the Burbank sand at 2776-2830 feet. The wells are offsetting unsold tracts, to be offered for sale in December.

Union County and Pine Island Only Active Area in Shreveport District

Shreveport, La.—The newly discovered producing area in Union County, Arkansas, continues to hold the center of interest in local oil circles, by reason of the fact that no other development of interest has been brought to light, in either State, since the inception of this latest discovery. The Pine Island Trinity development heads the list in point of activity, as it has since the territory was opened up in July of the present year; but interest seems to have waned after the first few months of drilling, during which time several failures or near failures were completed, as well as the irregular and spotted nature of the oil bearing formation. The early encroachment of salt water upon the producing sand also contributed to the short life of the prospective drilling boom which, at the time the first well was brought in, seemed imminent. There are now over 30 rigs running in the field, the greater part of them drilling below depths of 3500 feet. It has been noticed that permits issued for new work in this section are gradually diminishing, possibly brought about by the fact that nearly all wells that are being completed in the area now have to be blown with air or gas to secure production that, usually, is of very small amount, being accompanied by salt water in excess of the oil production.

In the Union County area, the Ohio Oil Company is moving in and setting up a drilling rig for its Will Pumphrey 1, location, in the southeast corner of the southeast of the northwest of section 1-17-14, a direct western offset to the Magnolia Petroleum Company's Carroll 1, which continues to maintain a flow of approximately 345 barrels of oil daily. This location is also an offset, to the north, of the Ohio's Crain 1, completed several weeks ago, and now pumping at the rate of about 50 barrels a day. The Magnolia Petroleum Company is reported to be rigging up for Carroll 2, in the northwest corner of the 40-acre lease upon which the first well was completed, and three other locations that have been made in the general vicinity of the present producing wells are getting in shape to start work immediately, bringing the total number of rigs that will soon be operating to five. The Ohio's Crain 2, located near the center of the southwest quarter of section 1-17-14, about one-half mile southwest of Crain 1 well, recently completed as the largest single producer yet bronght in in the field, has been filled to the surface with mud, preparatory to setting a full string of 4½-inch casing in an effort to shut off a salt water flow that developed soon after it was brought in. Should this work prove successful, it may have a tendency to revive activity in the direction of the Rovenger Oil Corporation's McCain 1 well, in section 4-17-14, approximately two and one-half miles west, although the acreage lying between the two respective wells has been almost entirely blocked by the three companies. The Rovenger's McCain well is now pumping at the rate of about 35 barrels of oil a day from the same horizon as that from which the Magnolia and Ohio wells are producing.

Recent completion of several large gas wells in the Richland Parish gas field, may cause a renewal of activity in this section, in view of the fact that several trunk lines are rapidly nearing completion and will soon be in position to start drawing gas from the wells. The work of the Lochnager Oil and Gas Company, in section 26-9-6e, Catahoula Parish, is also attracting considerable attention, especially in view of the fact that the company has secured a permit for the drilling of the third test in the area. The first well drilled by this company in this territory was destroyed by fire, following a gas blow-out which developed a large volume of gas and a heavy pressure, causing it to be abandoned. The second well was begun immediately on the same lease, and has now been drilled down to the depth of the first well, at which point it is scheduled to be tested within a few days. The third well has been started in section 29-8-6e, about six miles south of the original blow out, and is causing considerable comment among local operators for the reason that very little definite information can be had concerning the merits of the territory.

The Dixie Oil Company is rapidly nearing the depth of the deepest well ever drilled in De Soto Parish, having reached 5617 feet in Jenkins 1 wildcat in section 9-12-11. A vast amount of geological information has been secured during the drilling of this well, and there is every indication that it will be carried to greater depths than any well previously drilled in this parish. Lawson and Pharris have abandoned their Wise 1, in section 28-5-6, Natchitoches Parish, after drilling it to 1412 feet, and have started work on a second test, Clark and Morse Lumber Company 1, located in section 25-5-6. The Ouachita Natural Gas Company has likewise started work on its second wildcat test in section 34-19-3e, Ouachita Parish, and is now drilling at 50 feet in D'Arbonne 2-A. In Sabine Parish, the Arkansas Fuel Oil Company recently tested Moore 2, in section 32-10-12, an offset to the large well recently completed by Moffitt et al, in section 5-9-12, at a depth slightly below 3200 feet, resulting in a flow of oil estimated to be at the rate of about 100 barrels a day. They were not satisfied with the result, however, and the well was killed and arrangements made to drill deeper.

Move to San Angelo

Fort Worth, Texas.—Effective October 15, the Philmack Company announced the removal of its Texas headquarters from Fort Worth to San Angelo, Texas. Marshall Brown, geologist, is in charge of the San Angelo office.

Officials of the Atlantic Oil Producing Company were in Odessa during the week, en route to the West Texas fields on an inspection trip.

Oklahoma-Kansas Field Activities Show Big Drop During Last Two Weeks of September

Tulsa.—The decline of activity in the Mid-Continent territory is seen by a comparison of operations for the past two weeks in September, in which Oklahoma's active locations dropped from 1215 to 1161 within a single week and that of Kansas from 270 to 265. The Seminole area led at that time as it has led for the past two months in activity decline with 557 operations at the close of September as compared with 589 of the previous week.

Field activity in the two states at the close of the week ending September 28, as compared with the week ending September, 21 is shown as follows:

OKLAHOMA

Field or District—	September 21 Lcns.	Rigs.	Drlg.	SD.	Comp.	Total	September 28 Lcns.	Rigs.	Drlg.	SD.	Comp.	Total
Ponca City District:												
Tonkawa	..	..	4	1	1	6	..	..	4	1	..	5
Outside	4	2	26	10	5	47	4	2	27	18	4	55
Osage District:												
Burbank	..	2	9	9	1	21	..	2	10	9	..	21
Outside	4	8	13	3	4	32	6	7	12	5	4	34
Other Districts:												
Enid	5	5	38	28	3	79	5	7	27	25	1	65
Cushing	4	8	29	6	7	54	4	3	32	8	1	48
Tulsa-Okmulgee	7	43	60	17	10	137	8	41	55	22	6	132
Shawnee-Seminole	23	24	466	40	38	589	21	18	440	38	40	557
Muskogee	..	4	41	10	9	64	..	4	24	25	6	59
Lawton-Duncan	7	3	48	27	8	93	6	3	46	27	9	91
Ardmore	..	14	60	17	2	93	1	11	60	18	4	94
Totals	54	113	794	168	86	1215	55	98	737	196	75	1161

KANSAS

	27	50	116	64	13	270	24	45	112	64	20	265

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	Oct. 19 1927
New York Transit	2.65
Bradford District	2.65
National Transit	2.55
Southwest	2.55
Eureka	2.50
Buckeye	2.25
Macksburg	2.80
Gaines	2.60
Somerset	1.70
Cabell	1.60
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.35
Keister	1.30

CENTRAL STATES

Illinois	1.60
Indiana	1.48
Lima	1.71
Plymouth	1.33
Princeton	1.60
Waterloo	1.18
Wooster	1.57

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades 1.50

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas and Magnolia*

28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

*Magnolia's price for below 30 gravity is $1.05. Magnolia also pays Mid-Continent prices for Chalk field (Howard County Crude.)

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs crude.

Humble O. & R. Co.* and Texas Co.

28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.0 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Corsicana Heavy, 1.00 per barrel, posted by Magnolia.

*Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs crudes purchased at a gravity lower than 28 degrees will be paid for at the posted price for 28 degrees gravity.

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, Below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 is $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

(Continued on page 54.)

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 galolns in fields indicated)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Harbra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	.98	..	.90	.94	.91	..	.96	.96	.96	.89	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.03	..	..	..	..	1.01	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.06	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.09	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.12	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	1.15	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

Petreco
PETROLEUM RECTIFYING COMPANY OF CALIFORNIA
Why Stand "Cut-Oil" Losses?
Petreco will bring your emulsified crude to pipe line requirements and get the HIGHEST MARKET PRICE and the last cent for every barrel produced. A consultation with the "Official Oil Doctor" will show you the way to permanently end your "cut oil" losses, and immediately earn legitimate, additional profits.
PETROLEUM RECTIFYING COMPANY of CALIFORNIA
306 Union Oil Bldg. Los Angeles, Calif.
Petroleum Bldg. Houston, Texas

MARKHAM

	Oct. 19 1927
The Texas Company	
All grades	1.00

LULING

All grades	1.00

PANHANDLE

(Humble Oil & Refining Company and Magnolia Petroleum Company, Gulf Pipe Line Company, and Kay County Gas Company)*

Hutchinson, Carson and Wheeler counties, all grades .75

*Gulf and Kay County do not post in Wheeler County.

Gray County

(Humble Oil & Refining Company)

28 to 28.9 gravity	.80
29 to 29.9 gravity	.82
30 to 30.9 gravity	.84
31 to 31.9 gravity	.86
32 to 32.9 gravity	.88
33 to 33.9 gravity	.90
34 to 34.9 gravity	.92
35 to 35.9 gravity	.94
36 to 36.9 gravity	.96
37 to 37.9 gravity	.98
38 to 38.9 gravity	1.00
39 to 39.9 gravity	1.02
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.06
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.10
44 and above	1.12

(Humble Oil & Refining Company)

Crane, Upton, Crockett and Pecos counties, all grades .60

WEST TEXAS

(Humble, Gulf, Magnolia, Kay County Gas Company and Southern Crude Oil Purchasing Company.)*

Crane, Crockett, Pecos, Upton and Winkler Counties .60

*Kay County Gas Company does not buy in Winkler and Pecos Counties, and Southern does not buy in Pecos or Crockett.

Col-Tex Refining Company

Mitchell County	$ .93

WYOMING-MONTANA

Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	133
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.10
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.55
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek

Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	1.35
Cat Creek	1.33
Lake Basin	2.20

NEW MEXICO

Artesia	1.00
Hogback	1.38

CANADIAN CRUDE

	Oct. 19 1927
Oil Springs	2.18
Petrolia	2.11

*Bounty on Canadian crude is ¼ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS

(Standard of Louisiana, Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

	Oct. 19 1927
Below 28 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Eldorado and Bull Bayou.

STEPHENS

(All Companies)

Below 28	1.00
28 to 28.9 gravity	1.04
29 to 29.9 gravity	1.04
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.08
32 and above	1.10

SMACKOVER

(All companies)

Below 24 gravity	$ .90
24 and above	1.15
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.90
Cotton Valley	1.00
Calion	.90

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures. Barrels of 42 gallons)

	Total Month September	Total Month August	Week En'd October 8	Week En'd October 1
AT ATLANTIC COAST PORTS—				
Baltimore	841,000	599,000	95,000	206,000
Boston	343,000	280,000	65,000	145,000
New York	2,565,000	2,508,000	353,000	625,000
Philadelphia	384,000	442,000	.....	141,000
Others	1,131,000	1,069,000	217,000	*159,000
Total	5,264,000	4,898,000	730,000	1,276,000
Daily average	175,467	158,000	104,286	182,286
AT GULF COAST PORTS—				
Galveston District	170,000	65,000	.....	40,000
New Orleans & Baton Rouge	577,000	656,000	123,000	147,000
Port Arthur & Sabine District	.....	.....	.....	.....
Tampa	108,000	.....	49,000	.....
Total	855,000	721,000	172,000	187,000
Daily average	28,500	23,258	24,571	26,714
AT ALL UNITED STATES PORTS—				
Total	6,119,000	5,619,000	902,000	1,463,000
Daily average	203,967	181,258	128,857	209,000

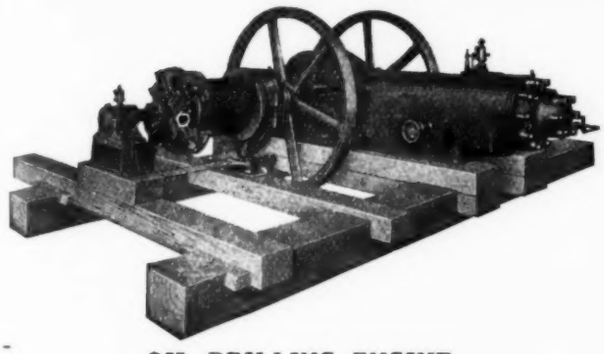
RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures. Barrels of 42 gallons)

	Total Month September	Total Month August	Week En'd October 8	Week En'd October 1
AT ATLANTIC COAST PORTS—				
Baltimore	691,000	574,000	.....	249,000
Boston	209,000	95,000	135,000	92,000
New York	1,542,000	1,492,000	458,000	378,000
Philadelphia	437,000	537,000	72,000	80,000
Others	586,000	*728,000	90,000	108,000
Total	3,465,000	3,426,000	755,000	907,000
Daily average	115,500	110,516	107,857	129,571
AT GULF COAST PORTS				
Daily average	.....	.....	.....	.....
Total Atlantic and Gulf Coast Ports	3,465,000	3,426,000	755,000	907,000
Daily average	115,500	110,516	107,857	129,571
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:				
Crude	1,227,000	*1,530,000	164,000	233,000
Gasoline	1,235,000	1,155,000	207,000	227,000
Gas oil	372,000	237,000	166,000	223,000
Fuel oil	631,000	504,000	218,000	224,000
Total	3,465,000	3,426,000	755,000	907,000

(*)Revised

FRANKLIN VALVELESS OIL AND GAS ENGINES

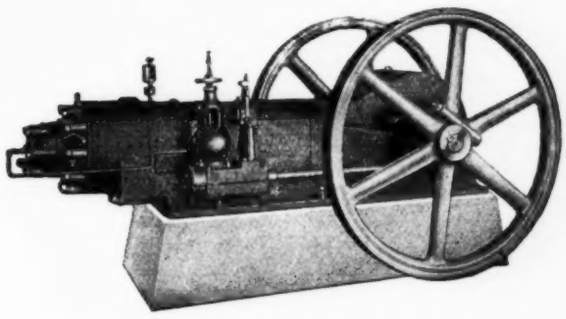


OIL DRILLING ENGINE

for Mid-Continent and Western Service $3700. Eastern Service $2600 and $3350. F. O. B. Factory.

OIL PUMPING ENGINE

In horse powers of 30, 40, 50 and 75. Can be equipped with reverse or one way clutch.



In Drilling or Pumping

On the Twin State's wildcatter at Stillwater, Texas, W. J. Bradley, Driller, put down 500 feet of 24-inch hole in seven days' drilling with a Franklin Valveless Oil Drilling Engine. The cost was $2.50 per day for water and the same for fuel oil—a saving of $30.00 per day over his previous experience with steam.

Show a drilling contractor a power plant that will drill more hole at a lower cost and with less trouble and he's "sold." Show him its lighter running mate that will do his swabbing and pumping at an even lower cost and he knows his troubles are solved. Try a Franklin Engine for results and economy.

Fuel costs—less than a Ford automobile. Repair bills—many Franklin Engines have drilled from 10 to 30 wells without costing one cent in repairs. Water bills cut many times. Ask a Franklin user.

FRANKLIN VALVELESS ENGINE CO.
FRANKLIN, PENNA.

Distributed by

OIL WELL SUPPLY CO.

Branches in All Oil Fields

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

Month—	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Ave.	Gross
January, 1926	449,370	100,130	260,180	90,290	43,990	181,190	101,000	102,300	621,300	1,946,980	60,356,380
February	450,037	101,937	245,989	91,550	45,090	169,676	99,000	98,412	605,250	1,909,637	53,469,836
March	454,762	103,300	260,262	92,712	48,787	164,312	97,625	102,325	604,500	1,929,562	59,816,422
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387	58,421,610
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990	61,875,690
June	456,450	107,637	302,187	89,912	60,412	167,887	106,250	112,925	606,925	2,013,187	60,395,610
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470	63,936,570
August	465,137	111,600	381,550	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662	67,042,522
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862	65,425,860
October	497,120	114,720	439,190	170,350	58,200	149,810	109,500	99,060	611,600	2,259,850	70,055,350
November	551,225	115,425	475,987	176,425	56,575	144,100	111,125	93,537	641,325	2,365,475	70,964,250
December	561,012	118,950	483,350	181,263	55,137	139,250	110,375	87,650	659,925	2,396,112	71,279,472
January 1927 . .	591,570	117,490	460,910	176,330	53,030	132,648	108,100	83,910	655,660	2,385,650	73,955,150
February.....	683,775	116,200	479,175	154,975	52,850	128,362	107,250	85,237	642,775	2,455,612	69,157,136
March.....	707,187	115,612	475,375	154,262	51,450	124,662	104,500	87,200	644,350	2,462,625	76,341,375
April.....	723,820	115,510	476,920	155,420	50,670	114,860	107,500	89,130	643,520	2,477,350	74,320,500
May.....	716,175	114,675	488,125	151,375	47,465	113,525	113,625	89,625	633,225	2,491,975	77,374,910
June	760,712	112,662	481,950	151,650	48,762	112,612	112,125	85,725	640,325	2,506,037	75,181,125
July	839,580	108,200	476,750	144,110	55,280	110,290	111,700	87,110	621,920	2,554,940	79,203,140
August	837,750	105,187	483,812	138,787	57,375	105,175	114,750	81,837	619,825	2,544,500	78,879,500
September	796,587	105,175	489,137	143,487	53,775	101,637	111,250	73,800	636,750	2,511,650	75,349,500
October 1	809,700	105,000	505,250	140,800	52,350	100,550	110,500	77,500	635,300	2,536,950	17,755,650
October 8	807,000	104,800	506,300	139,550	51,850	100,200	112,000	72,100	633,000	2,526,800	17,673,600
October 15	790,200	104,750	496,750	135,450	51,600	101,050	113,000	72,350	629,200	2,494,350	17,460,450
Increase	.....	.....	.....	.....	.....	850	1,000	250	.....	.....	.....
Decrease	16,800	50	9,550	4,100	250	.....	.....	.....	3,800	32,450	227,150

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Oct. 15	Oct. 8
Hutchinson County	66,300	69,100
Gray County	14,100	11,550
Carson County	8,400	8,500
Wheeler County	1,400	1,500
Totals	90,200	90,650

NORTH TEXAS

Burkburnett	13,000	13,100
Electra	12,750	12,500
Iowa Park-KMA	2,400	2,550
Wilbarger	12,000	11,750
Archer County	24,800	25,700
Clay County (Petrolia)	500	500
Baylor County	100	100
Montague and Cooke Cos. . ..	16,600	16,800
Totals	82,150	83,000

WEST CENTRAL TEXAS

Stephens County	8,250	8,300
Eastland-Desdemona	8,800	8,950
Brown County	21,500	22,000
Coleman County	1,050	1,100
Callahan County	4,200	4,300
Shackelford County	5,200	5,450
Young County	10,100	10,500
Throckmorton County	1,300	1,300
Jack County	800	850
Palo Pinto County	600	700
Others	600	600
Totals	62,400	64,050

WEST TEXAS

Jones County	1,500	1,550
Mitchell-Scurry Cos.	3,500	3,750
Howard County	3,400	3,100
Reagan County	23,250	23,200
Crane-Upton Counties 132,200		137,850
Crockett County	1,850	2,550
Pecos County	27,100	27,100
Winkler County	10,500	9,550
Others	2,650	2,500
Totals 205,950		211,150

EAST CENTRAL TEXAS

Mexia	9,200	9,400
Currie	650	700
Richland	700	750
Wortham	2,650	2,750
Corsicana-Powell	14,000	14,700
Nigger Creek	1,500	1,600
Totals	28,700	29,900

SOUTHWEST TEXAS

Luling	15,050	15,200
Lytton Springs	1,800	1,500
Somerset	850	850
Laredo District	8,800	8,950
Dale	400	550
Others	450	450
Totals	27,350	27,550
T'tl Tex. (Outside Gulf Coast)	496,750	506,300

TEXAS GULF COAST

West Columbia	9,000	10,000
Damon Mound	900	900
Big Creek	4,600	3,000
Boling	2,400	2,250
Blue Ridge	3,750	4,000
Pierce Junction	7,950	8,350
Humble	2,000	2,000
Goose Creek	7,800	8,000
South Liberty	2,400	2,600
Hull	16,000	16,950
Saratoga	900	900
Batson	1,400	1,400
Sour Lake	4,200	4,050
Spindle Top	49,200	52,950
Orange County	4,400	4,400
Others	3,350	3,500
Totals	120,250	125,250
Texas Total	617,000	631,550

OKLAHOMA

North Braman	2,600	2,650
South Braman	2,400	2,400
Blackwell	3,950	3,950
Hubbard	3,750	3,950
Thomas	3,250	3,750
Tonkawa	18,050	18,800
Garber	10,400	10,800
Burbank	35,000	35,050
Osage (outside Burbank)	30,650	30,800
Watchorn	1,800	1,800
Cushing	21,250	21,300
Yale Jennings	9,650	9,650
Davenport	2,800	2,800
Bristow Slick	24,900	24,900
North Okmulgee	16,200	16,200
Lyons Deaner	6,300	6,500
Stroud	1,250	1,250
Cromwell	11,600	11,800
Papoose	6,200	6,250
Wewoka	13,700	14,050
Seminole	68,950	70,150
Bowlegs	130,950	136,700
Searight	29,700	30,600
Little River	39,550	37,550
Earlsboro	172,400	178,600
Duncan District	7,000	7,000
Graham	6,500	6,500
Fox	1,900	1,900
Healdton	15,000	15,000
Hewitt	9,500	9,500
Scholem Alechem	14,000	15,500
Others	69,050	69,350
Totals	790,200	807,000

CALIFORNIA

Santa Fe Springs	39,000	38,500
Long Beach	91,500	92,500
Huntington Beach	63,000	63,000
Torrance	20,500	20,500
Dominguez	15,000	15,000
Rosecrans	8,000	8,000
Inglewood	33,000	33,000
Midway-Sunset	84,000	84,000
Ventura Avenue	56,200	57,500
Seal Beach	62,000	66,000
Others	157,000	155,000
Totals	629,200	633,000

KANSAS

Greenwood County	32,500	32,600
Florence-Covert	1,500	1,500
Peabody-Ebling	3,850	3,850
Eldorado-Towanda	14,250	14,250
Augusta-Fox Bush	4,250	4,200
Rainbow Bend	2,100	2,150
Russell	2,500	2,500
Churchill	13,800	13,850
Others	30,000	29,900
Totals	104,750	104,800

NORTH LOUISIANA

	Oct. 15	Oct. 8
Homer	4,750	4,700
Haynesville	7,150	7,100
Caddo Light	13,450	13,350
Caddo Heavy	4,800	4,800
DeSoto-Red River	4,050	4,050
Elm Grove	650	700
Bellevue	1,250	1,200
Cotton Valley	5,150	5,200
Urania	9,300	9,750
Pleasant Hill	1,050	1,000
Totals North Louisiana	51,600	51,850

LOUISIANA GULF COAST

Vinton	4,950	4,750
Lockport	5,700	5,400
Evangeline	1,300	1,250
Edgerly	1,850	1,700
Others	1,400	1,200
Total Louisiana Gulf Coast .	15,200	14,300
Louisiana total	66,800	66,150

ARKANSAS

El Dorado	6,150	5,300
Smackover Light	10,000	9,600
Smackover Heavy	77,550	78,100
Stephens	1,200	1,200
Nevada	3,050	2,850
Lisbon	3,000	3,050
Others	100	100
Totals 101,050		100,200

MOUNTAIN STATES

WYOMING

Salt Creek	32,600	31,300
Grass Creek	2,600	2,650
Elk Basin	1,050	1,150
Big Muddy	2,750	2,950
Lost Soldier	2,600	2,750
Rock River	2,700	2,700
Lance Creek	600	700
Teapot Dome	850	450
Others	4,250	4,400
Totals	50,000	49,050

MONTANA

Cat Creek	2,000	2,000
Sunburst	11,500	11,500
Others	250	250
Totals	13,750	13,750

COLORADO

Moffats (Craig)	1,500	1,650
Fort Collins	2,800	3,000
Florence	900	800
Others	1,200	1,250
Totals	6,400	6,700

NEW MEXICO

Table Mesa	....	450
Artesia	1,400	1,450
Hogback	250	250
Rattlesnake	400	350
Others	150	100
Totals	2,200	2,600
Totals Mountain States	72,350	72,100

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y. . .	113,000	112,000

PRODUCTION SUMMARY

East of Rockies	1,792,800	1,821,700
United States	2,494,350	2,526,800

Two *New* Reid 2 Cycle Gas Engines

40HP and 45HP—Entirely Enclosed Splash Oiling System—Replaceable

Main Bearings — New Governor Greater Power and Economy Unprecedented Speed Range

Write any branch or agency for complete information

JOSEPH REID GAS ENGINE COMPANY, Oil City, Pennsylvania, U. S. A.

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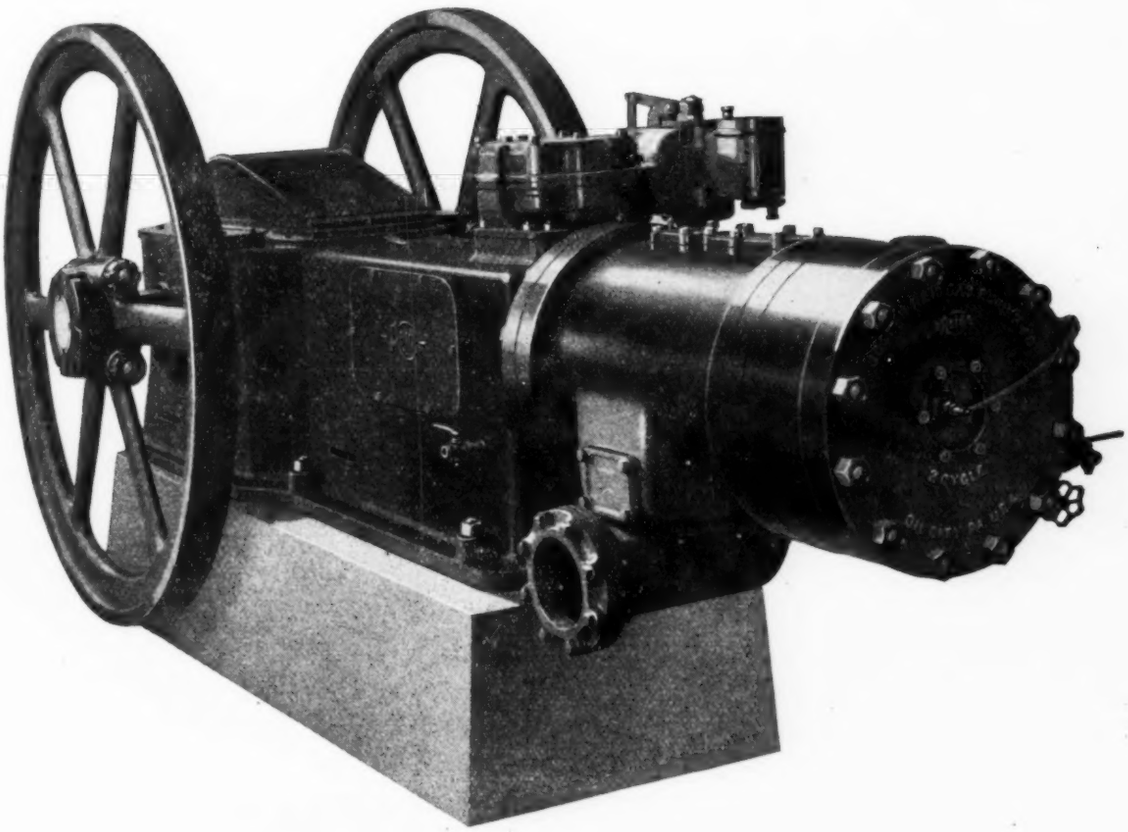

REID OIL FIELD MACHINERY

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	6	6	4	3	..	1	2	2	584	138
California	24	15	22	13	..	..	2	2	12,695	8,225
Colo ado	3	..	3	..	..	..	..	..	1,100	....
Indiana	6	2	5	1	..	..	1	1	168	10
Illinois	2	7	1	2	..	..	1	5	15	55
Kansas	13	18	6	5	2	..	5	13	385	865
Kentucky	28	18	15	15	1	2	12	1	542	731
Louisiana	11	19	5	6	2	7	4	6	310	1,715
Michigan	3	4	1	1	..	..	2	3	10	15
Montana	12	..	10	..	1	..	1	..	1,672	....
New York	19	..	19	..	..	..	..	..	62	....
Ohio	31	42	19	14	5	19	7	9	480	97
Oklahoma	75	64	39	37	11	5	25	22	34,178	29,126
Pennsylvania	66	6	57	..	6	3	3	3	253	....
Texas	98	99	54	61	6	8	38	30	42,417	24,460
West Virginia	26	42	7	3	15	27	4	7	106	194
Wyoming	5	..	5	..	..	..	..	..	287	....
Totals	428	342	272	166	49	72	107	104	95,264	65,735
Increase this week	86	..	106	..	..	..	3	..	..	....
Decrease this week	..	..	..	..	23	..	..	..	..	....

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; aban—abandoned; bbls—barrels; b. s.—basic sediment; csg—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—flshing; ft—feet; in—inches; loc—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
BALDWIN HILLS-INGLEWOOD—		
Standard, Baldwin-Cinega 54	225	2045
EAST COYOTE—		
Chicksan Oil Co., Robertson 1	*	5400
HUNTINGTON BEACH—		
Standard, Pacific Electric 13	125	3820
Pacific Electric 15	125	3920
Allen Brown No. 1	225	2200
Coast Line Oil Co. No. 1, wo	100	4350
Crudoil Co. No. 8	225	4450
Young & Lundberg Ames 1	10	4430
KERN FRONT—		
General Pet. Co., S 11 13, 26-28-27	400	2230
Pet. Securities Co., B1, 22-28-27	100	2475
LONG BEACH—		
Cal. Pet. Corp., Davidson 6	2050	5670
SEAL BEACH—		
Cal. Eastern Oil Co., Ostraff 1, wo	800	5475
George F. Getty, No. 2, wo	500	5473
No. 12, wo	700	5475
Marland, Selover 16, wo	2100	5455
Pet. Securities Co., Bryant A5, wo	100	5460
Murphy 1, wo	2000	5550
Superior Oil Co., Fee 1, wo	500	5340
Universal Cons. Oil Co., No. 1, wo	500	5480
SOUTH MOUNTAIN—		
Cal. Pet. Corp., Willard 20	100	4060
VENTURA—		
Pet. Securities Co., Orton 2	1800	6250
WHEELER RIDGE—		
Standard, No. 30, 27-11-20	60	2700

EASTERN STATES

PENNSYLANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
South Penn Oil Co., Bingham 439, tr 102	55	....
Bingham 420, tr 1	10	....
Bingham 395, tr 2	3	....
Bingham 570, tr 1	3	....
Bingham 150, tr 86	5	....
Fee 35	2	....
Fee 36	2	....
Fee 116	4	....
Middaugh 58	2	....
Melvin 201	2	....
Kendall 67	2	....
Jones 233	2	....
Jones 234	2	....
Jones 235	2	....
Cotton 63	2	....
Smith 149	2	....
Smith 150	2	....
Hooker 21	2	....
Forest Oil Corp., Forest 202	3	....
Forest 204	3	....
Tyler 203	3	....
Tyler 204	3	....
Forest Pet. Corp., Taylor 1-C2	3	....
Taylor 1-C15	3	....
Taylor 1-D17	3	....
Taylor 1-D21	3	....
Taylor 1-E16	3	....
Drake 1-G19	3	....
Drake 1-H12	3	....
Drake 174	3	....
Drake 176	3	....
Davis Oil Co., Davis 1	3	....
Davis 2	4	....
Mix Creek Oil Co., Mix Creek 40	4	....
Mix Creek 41	4	....
Hazlewood Oil Co., Bingham 1	4	....
Bingham 2	4	....
C. B. Kirvin, Baldwin 8	2	....
Hope Oil Co., Richardson 6	4	....
C. M. Simons, Corwin 4	3	....
T. P. Thompson, Franchot 17	3	....
W. N. Hunter, Hostetter 1	4	....
Hilliard & Dodge, Dodge & Co. 1	4	....
Phoenix Oil Co., Kennedy-Clark 1	3	....
Kendall Ref. Co., Bishop 5	2	....
A. H. Wiborg, Meldrum 6	4	....
C. & E. L. Minnich, Kirvin 3	4	....
E. A. Smith, Burns 1	7	....
J. W. Kaufman, Rounds 9	7	....
GREENE COUNTY—		
Carnegie Nat. Gas Co., Whitley 1	¶¼	....
BUTLER COUNTY—		
Kronberg & Co., Week Hrs. 1	7	....
M. W. Graham & Co., Campbell 11	7	....
Iman & Co., Kellerman 1	¶1½	....
M. Dunlap, Lillian Home 1	*	....
FOREST COUNTY—		
Marienville Gas Co., Warrant 3179 1	¶1	....
Taggert, Gesin & Co., Clapp 66	*	....
CLARION COUNTY—		
Maggio Oil Co., Maggio 2	7	....
W. W. Wilson, Wilson 1	¶1	....
Alum Rock Gas Co., Daum 3	¶1	....
VENANGO COUNTY—		
Plum O. & G. Co., Matthews 1	3	....
Brutsch & Co., Columbia 1	3	....
Surety Oil Co., Summers 5	3	....
E. A. Bream & Co., Broadbent 2	*	....
Oil Well Supply Co., Shaw 114	¶½	....
C. M. Hughes, Hughes 12	2	....
Nat. Pet. Co., Watson-Dalrymole 12	2	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGANY COUNTY—		
Forest Oil Corp., Forest 302	3	....
Forest 305	3	....
Forest 307	3	....
Forest 308	3	....
Empire G. & F. Co., Empire 21	3	....
Empire 22	3	....
South Penn O. Co., Hazlewood, tr 65	2	....
Hazlewood, tr 66	2	....
J. K. Cochran & Co., McDermitt 11	3	....
McDermitt 12	3	....
McDermitt & Co., McDermitt 3	7	....
Phillips & Howard, Howard & Co. 1	5	....
M. J. Crowley & Co., Crowley 9	4	....
LeSuer Oil Corp., I eSuer 3	3	....
Colegrove Oil Co., Colegrove 1	3	....
N. V. V. Franchot, Fries 7	3	....
J. P. Herrick & Co., Pratt 1	3	....
Albert Oil Co., Albert 9	3	....
McDivitt & Co., McDivitt 3	3	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls	Depth
RITCHIE COUNTY—		
John Lock & Co., Hall 2	¶½	....
Park Bowser, Grimm 1	¶½	....
South Penn Oil Co., Nester 2	*	....
Freehold O. & G. Co., Hannan 6	¶1	....
Smith Whan, Wolfe 1	¶1	....
Robert Rinehart, Thomas 1	¶1	....
Hope Cons. & Ref. Co., Hill 1	60	....
CALHOUN COUNTY—		
Hope Nat. Gas Co., Parson 1	*	....
Sycamore Sup. Co., Morris 1	10	....
H. C. Simmons, Powell 1	5	....
Chemical Gas Co., Snyder 1	2¶	....
CLAY COUNTY—		
South Penn Oil Co., Stockley 63	10	....
Ohio Fuel Oil Co., Reed 1	8	....
PLEASANTS COUNTY—		
Keith Thompson, Myria K. Smith 1	10	....
Dinsmoor & Co., H. Severns 1	*	....
LINCOLN COUNTY—		
L. R. Sweetland & Co., Sweetland 22	¶¾	....
S. V. Reishman, Behler 1	¶½	....
LEWIS COUNTY—		
Carnegie Nat. Gas Co., McCue 1	¶1½	....
Hope Nat. Gas Co., Hill 1	*	....
MONONGALIA COUNTY—		
Carnegie Nat. Gas Co., Sine 3	¶1¼	....
Philadelphia Gas Co., Moore 1	¶1½	....
MARSHALL COUNTY—		
Decem Dev. Co., Bonar 8	3	....
WETZEL COUNTY—		
Hope Nat. Gas Co., Long 2	¶2	....
Pittsburgh & W. Virginia Gas Co., Morris 1	¶¾	....
GILMER COUNTY—		
Sears O. & G. Co., Campbell 1	¶1¼	....
MARION COUNTY—		
Owens Bottle Mach. Co., Hibbs 1	¶2	....

INDIANA

Company, Well and Location	Initial Production Bbls	Depth
GIBSON COUNTY—		
Bell Bros., Lindsay 1	30	1355
Peoples Pet. Co., Eisler 1	*	1425
SULLIVAN COUNTY—		
Siosi Oil Corp., Thompson 3	75	....
DAVIESS COUNTY—		
Hartman, Sargent & Co., Willdman 2	35	1342
KNOX COUNTY—		
Murphy Oil Co., Cooper 1	18	1205
PIKE COUNTY—		
Wiser Oil Co., Phillips 5	10	1355

ILLINOIS

Company, Well and Location	Initial Production Bbls	Depth
WABASH COUNTY—		
Wabash Oil Co., Stillwell 7	15	1390
CRAWFORD COUNTY—		
H. D. Barker & Co., Baker 1	*	....

MICHIGAN

Company, Well and Location	Initial Production Bbls	Depth
SAGINAW COUNTY—		
Sun Oil Co., Bradshaw 4	10	1860
Local Oil Co., Foot State Street 1	*	2295
GENESEE COUNTY—		
Universal Oil Co., Mt. Morris 1	*	1700

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls	Depth
AUGLAIZE COUNTY—		
Brookside O. & G. Co., Kuckerman 7	50	1237
ALLEN COUNTY—		
South Fork Oil Co., Reynolds 5	10	1170
WOOD COUNTY—		
West Millgrove G. Co., Rosendale 1	¶¼	1217

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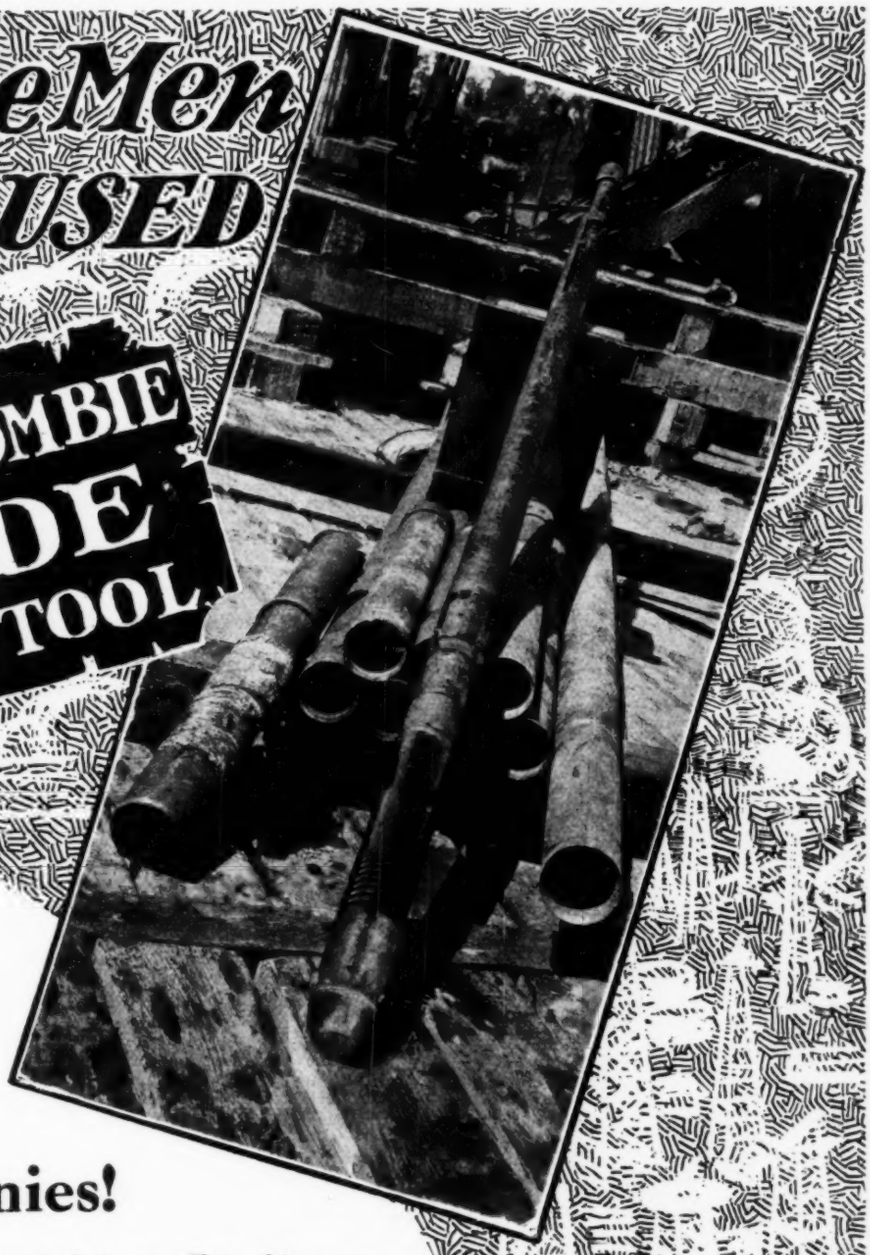

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SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
J. T. Knowlton & Co., Myers 4 ..	10	....
JEFFERSON COUNTY—		
Braden, Sperry & Co., Hatterlet Hrs. 1	10	....
MORGAN COUNTY—		
Ohio Fuel Sup. Co., Joy 5	¶½	....
MONROE COUNTY—		
Whitten Oil Co., Smith 3	*	....

CENTRAL OHIO

GUERNSEY COUNTY—		
Russell Oil Prod. Co., Banigar 3	¶2	1246
Davis Bros. Co., Ruby 4	25	....
Ruby 5	30	....
Ohio Fuel Supply Co., Sherman 1..	*	....
Johnson 1	*	....
Armstrong 1	*	....
McCourt 5	12	3670
LICKING COUNTY—		
Ralph Bros., Inc., Boy Scouts 1...	3	....
Margaret Oil Co., Rinehart 2	3	....
Arkansas Fuel Oil Co., Anderson 1	5	....
Murphy & Co., Cullison 1	*	....
Pure Oil Co., Priest 1	40	....
Zahnizer & Robinson, Mack 1	75	....
HOCKING COUNTY—		
Riggs Oil Co., Riggs 1	40	....
George H. Long, Dwiggins 2	3	....
Logan Gas Co., Linton 2	*	....
Right O. & G. Co., White-Henghst 1	40	....
MUSKINGUM COUNTY—		
Burkhart & Co., Brake 1	¶½	....
Hope Cons. & Ref. Co., Epley 1 ...	104	....
ATHENS COUNTY—		
O. C. Dunn, Finsterwald 15	4	....
COLUMBIANA COUNTY—		
L. H. Benninghoff & Co., Heffner 8	3	....
COSHOCTON COUNTY—		
Ohio Oil Co., Kasner 1	¶1¼	....
HOLMES COUNTY—		
Kemrow Co., Shuy 1	*	3165
PERRY COUNTY—		
Sunday Creek Coal Co., Fee 144 ..	13	....

KENTUCKY

WARREN COUNTY—		
Dr. H. L. Fischer, Wheeler 3	¶1	440
OWSLEY COUNTY—		
Big Injun Oil Co., Bewer 3	3	800
LEE COUNTY—		
August Girard & Co., Chambers 4	5	....
DAVIESS COUNTY—		
Rowe Oil Co., Daviess County Poor Farm 1	*	900
GRAYSON COUNTY—		
Carville, Robinson & Co. 1	*	....
Jones, Robinson & Co. 1	*	....
ESTILL COUNTY—		
Wood Oil Co., Inc., Woffenbarker 1	2	....
Brenner & Adams, Sparks 7	3	....
Superior Oil Corp., West 14	*	....
Alexander 20	5	....
Alexander 21	*	....
BARREN COUNTY—		
Hunt, Mitchell & Co., Browning 1..	6	465
Nichols 2	1	435
White & Stombo, Williamson 3 ...	5	490
Holeman 1	*	410
R. B. Tyler, Mayfield 3	2	436
Samson Oil Co., Morgan 2	*	510
OHIO COUNTY—		
Wood Oil Co., Inc., Elmore 17 ...	200	....
Creek Drlg. Co., Lake 10	200	....
Ohio Oil Co., Lake 1	50	....
Lake 1	40	683
J. C. Ellis & Co., Weller No. 2, tr 1	*	....
Mt. Moriah Church, lot 2	*	....
Gossett 1	10	534
S. A. Russell & Co., Kelly 1	10	480
Engle & Co., Chapman 1	*	....
Kelly & Yewell, Wedding 1	*	....
Lowman & Daily, Baker 1	*	500

MOUNTAIN STATES

SALT CREEK—		
Midwest. Ref. Co., 24L, sw 35-40-79	122	2527
LA BARGE—		
Calif. Pet. Corp., 4H, sw 34-27-113	50	....
5G, nw 34-27-113	50	....
3G, 3-27-113	50	....
TORCHLIGHT—		
Alvasakie & Slagle, ne 25-51n-93w ..	15	591

COLORADO

ILES—		
Midwest R. Co., 18SD, sw 23-4n-92w	500	3342
34SD, sw 22-4n-92w	500	3000
FLORENCE—		
Continental Oil Co., Gus Hall tr ...	100	1970

MONTANA

KEVIN SUNBURST—		
Dakota-Montana Oil Co., Carlson 9, se 7-34-1w	100	1366
Carlson 10, se 7-34-1w	*	1370
Carter Oil Co., Lind 5, nw 11-35-2w	35	1535
P. M. K. Oil Co., Kalispell 7, se 19-35-1w	45	1522
California Co., Neuman 8, 22-35-2w	12	1524
Marharg-Goeddertz, 2A, 23-35-3w ..	30	1682
Meows Oil Co., Adams 1, 12-34-2w	300	1448
Hannah-Porter Oil Co., Harte 2, 7-34-1w	1000	1354
Blue Sage Oil Co., Wilcox 1, 8-34-1w	150	1370
"56" Pet. Corp., Caine 34, ne 32-35-1w	pumping	1462
Shelby O. & G. Co., Houdek, 23-32-2w	¶8	1564
Western Drilling Co., Anderson 6, 30-35-1w	pumping	1463

OKLAHOMA

CADDO COUNTY—		
English Drlg. Co., Gaffney 2, csl nw se 31-6-9	10	2325
COMANCHE COUNTY—		
Couch & Cherry, Watson 1, ne c sw ne 24-2-10	30	1863
CREEK COUNTY—		
Nowata O. & R. Co., McNac 4, ne c nw ne sw 16-16-9	25	3012
Pontiac Oil Co., Fulsom 9, cel sw sw 13-17-10	25	2525
C. G. Tibbens Jackson 1, nw se sw 4-18-12	¶1	1757
P. & R. Corp., C. C. Warren 1, nw se se 23-18-11	¶4	1897
Atlantic & Phillips, Abraham 1, nw sw se 19-14-93	*	3842
Indep. O. & G. Co. & Tibbens Oil Co., Grayson 1, nw sw ne 27-15-8	*	2835
F. R. Billingslea, Walker 1, nw sw nw 28-16-7	*	3855
Peters Pet. Co., Abraham 2, ne se se 4-17-11	*	2631
Purser et al, A. George 1, ne c sw se 23-18-11	*	2295
GARFIELD COUNTY—		
Sinclair, Bangerter 4, ne nw se 26-22-4	*	1860
GARVIN COUNTY—		
Mid-Continent, Derdyn 1, ne nw sw 17-1-3	15	1642
GRADY COUNTY—		
Garvin Drlg. Co., Woods 1, ne sw ne 17-3-5	¶11	2248
Marland, Burke 3, nw c sw 16-3-5 .	7	2613
Okla. Nat. Gas, Dryden 2, sw c nw 2-4-8	¶8	2120
Magnolia, Cochran 3, ne sw se 27-3-5	*	2770
Carter, M. Keran 3, nw c se 21-3-5	*	3589
Amerada, Gardenshire 1, sw se sw 5-3-5	*	2815
HUGHES COUNTY—		
Indep. O. & G., Tecumseh 2, csl ne sw 16-10-9	¶25	3040
Future Dev. Co. & Schermerhorn, Bruner 1, c se ne 20-10-9	¶42	3274
JEFFERSON COUNTY—		
Carter, Gibson 1, c nw nw 4-6-5 ...	*	2812
LINCOLN COUNTY—		
Empire, Ward 1	*	4495
MUSKOGEE COUNTY—		
E. M. Neal, Bruner 1, cwl nw ne 14-15-17	*	1468
D. C. Lampton, E. Love 1, cwl nw ne 16-15-18	*	1020
OKFUSKEE COUNTY—		
Josey Oil Co., Carolina 1, ne c se 32-12-11	40	3642
OKMULGEE COUNTY—		
B. Martin, Calloway 2, cel se nw 3-11-12	¶7	1005
F. A. Robert, J. Renite 7, cnl sw nw 18-14-15	10	1093
J. L. Selby, B. Stevens 8, csl n½ sw 10-14-14	15	1225
OSAGE COUNTY—		
I. T. I. O. Co., No. 366, sw c ne nw 28-26-11	¶2	2068
Plains Pet. Co., 1, ne c sw se 34-24-10	*	1279
Peters Pet. Co., No. 1, sw c 23-25-9	*	2315
Carter, No. 4, se ne ne 33-27-6 ...	*	....
PAYNE COUNTY—		
Pure, Axtell 2, nw sw sw 8-18-4....	*	4590
PITTSBURGH COUNTY—		
Quinton Spelter Co., M. A. Featherstone 1 ,c sw ne 22-7-17	¶1	2650
PONTOTOC COUNTY—		
Louisiana O. & R. Co., Harjo 3, sw ne sw 17-5-8	225	2404
American O. & R. Co., Galcrop 4, sw c ne 10-4-6	*	1350
Wray 2, se nw nw 34-5-6	*	1870
T. P. Coal & Oil Co., Harrison 1, nw c 35-5-6	*	2826
Price 1, nw ne se 33-5-6	*	2851
POTTAWATOMIE COUNTY—		
Mid-Continent, McKinley 8, nw ne sw 9-9-5	250	4332
Amerada, Cowden 7, ne sw sw 4-9-5	95	4372
SEMINOLE COUNTY—		
Mid-Continent, Wadsworth 3, nw sw sw 36-8-6	1940	4229
Gypsy, Pattey 1, sw ne ne 35-8-6 ..	2225	4325
Blackwell O. & G. Co., Nitey 5, se ne se 35-8-6	4077	4136
Amerada, Pattey 1, se nw ne 35-8-6	1875	4125
Carter, Wise 9, se sw ne 23-8-6 ...	1845	4295
Wise 8, ne sw ne 23-8-6	280	4535
I. T. I. O. Co., Bowlegs 7, ne sw ne 22-8-6	65	4605
Texas Co., Reed 5, sw se ne 14-8-6	640	4204
Gypsy, Grayson 2, nw c 13-8-6	440	4188
Sinclair, Cumsey 2, se sw ne 10-8-6	587	4114
Gypsy, Cumsey 3, ne c se 10-8-6 ...	540	4173
Tidal, D. Harjo 2, ne c sw 25-9-6..	795	4270
I. T. I. O. Co., Fleet 1, se c nw 25-9-6	38	4424
Carter, Davis 1, nw sw nw 13-9-5 ...	920	4399
Sinclair, Hollins 3, nw ne nw, 12-9-5	375	4235
Texas Co., Brown 5, nw se nw 10-9-5	100	4410
Indep. O. & G. Co., Bruner 3, ne sw ne 10-9-5	8850	4378
Bruner 2, se sw ne 10-9-5	1560	4322
Barnsdall, N. Bruner 1, nw ne ne 10-9-5	2985	4283
Empire, Edmundson 3, nw se sw 3-9-5	1640	4272
Edmundson 2, sw se sw 3-9-5	91	4397
Amerada, Strothers 1, sw nw ne 3-9-6	1465	4334
Carter, Lukes 7, sw ne ne 27-9-6...	*	4535
Sinclair, Roberts 1, ne nw nw 5-10-8	*	3548
STEPHENS COUNTY		
Beard & Cobb, Dierkes 1, sw c ne nw 13-2-8	¶8	1593
Magnolia, Green 1, sw c ne 13-1-4	40	1930
Medlin et al, Simpson 5, ne c nw se 34-1-8	25	1673
Margay Oil Corp., Lane 5, se c sw nw sw 7-1-8	10	2670
S. Linson, Brown 3, ne sw se 23-1-9	18	2234
Pearce & Brown, Fowler 1, nw sw sw 34-2-6	*	2010
Owen & Wood, Massey 5, sw c nw 12-2-8	*	2097
TULSA COUNTY—		
Glidden Oil Corp., Vannest 2, csl se ne 34-19-13	¶1	492
Ellen O. & G. Co., Island 6, nw ne ne 25-18-14	30	1317

KANSAS

BUTLER COUNTY—		
Empire, Hutchinson 1, "c", se c nw, 34-27-5	40	2723
Skelly, Knox 1, sw c nw, 17-27-7..	¶3	2606
Patton et al, Shriver 4, se c sw se 33-27-6	*	....
CHASE COUNTY—		
Lariaux et al, Lamb 1, nw c 10-18, 19-19-6	*	2590
COWLEY COUNTY—		
Roth & Faurot, Bailey 1, c nw se 5-35-5	*	683
ELK COUNTY—		
Hood et al, Byman 1, cel se se 9-31-10	¶3	1126
Boudell et al, Rettig 2, ne c 29-31-10	10	1526
Theta Oil Co., Lisco 2, ne c 34-31-10	30	2289

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Say you saw it in The OIL WEEKLY

Company, Well and Location	Initial Production Bbls.	Depth
GREENWOOD COUNTY—		
Bruce, Bradley et al, Pixlee 1, se c 3-22-10	225	2156
Rogers et al, Hayes 1, nw c se sw sw 35-25-10	40	2065
Hoover 1, ne c nw ne nw, 2-26-10	40	2005
Murphy et al, Old 1, lot 4, blk 53, Eureka Townsite 34-25-10	*	....
MORRIS COUNTY—		
Hawes, Ainsworth et al, Seastead 1, ne c se nw 8-17-5	*	2631

ARKANSAS

NEVADA COUNTY—		
Autrey Oil Co., Martin C-2, 6-14-20	50	1192
J. J. O'Brien, Moss B-5, 1-14-21	125	1162
UNION COUNTY—		
Magnolia, Carroll 1, 1-17-14	360	2982
Smitherman & McDonald, Saxon B-5, 5-16-16	49	2534

LOUISIANA

BOSSIER PARISH—		
Simms Oil Co., Dodson 1, 15-23-12	¶43	3085
CADDO PARISH—		
Standard, Stiles 179, 33-21-16	75	1838
LASALLE PARISH—		
Zoder et al, Urania 5, 7-10-2é	150	1521
RICHLAND PARISH—		
Gulf, Marshfield 2, 29-17-6e	¶65	2447

SOUTH LOUISIANA

EVANGELINE—		
Abshier Bolyard Oil Co., SFS 2	45	1610
Ratcliff Oil Co., Martin 9	30	1800
The Texas Co., Latrielle 2-B	10	1950

TEXAS

TEXAS GULF COAST

SPINDLE TOP—		
Gulf, Mann 7	1500	4175
Sun, McLean 12	*	6300
McLean 7	3200	5025
GOOSE CREEK—		
Gulf, Hoffman-Gaillard 8	125	2750
Stateland Producers 11	30	2500
HULL—		
Big Dome Int., Palmer 3	*	2300
PIERCE JUNCTION—		
Woodward-Lee, Settegast 3	*	3196
ORANGE—		
Brownie-Babbett Oil Co., Peveto 1	30	3200
NASH DOME—		
Rycade, Fritz Meier 4	560	4150
BARBERS HILL—		
Mills-Bennett Prod. Co. & Moody Corp.	700	3214

EAST TEXAS

HARRISON COUNTY—		
J. R. Bahan, Furrh 4, J. Short sur	¶4	1003
Cox et al, Clark 1, J. Lipscomb sur	¶3	972
Tylong O. & G. Co., Cook 2, R. W. Bedford sur	¶9	1945

CENTRAL WEST TEXAS

BROWN COUNTY—		
Gilman & McMurray, Kilgore 1	*	1203
Humble, Gilbreath 3	260	1315
McMurray et al, Newton 15	5	1270
Phillips, Newsome 4	240	1344
Roxana, Smith 8	6	1323
21	88	1328
22	40	1328
24	91	1332
Scrivenor et al, Trueheart 1	10	1402
Sinclair, Smith 6	215	1333
7	400	1341
E. L. Smith, Moore 1	154	1288
8	800	1340
18	610	1342
Wheelock & Collins, Smith 1	280	1351
CALLAHAN COUNTY—		
Navarro, Bennett-Booth B-12	50	1643
Shaw et al, Miller 9	10	1654
COLEMAN COUNTY—		
Cheney et al, Overall 1-C	50	1610
Kenwood Oil Co., Ward 1	¶3	600
EASTLAND COUNTY—		
Lewis Trustee, Fox 1	8	1574

TEXAS PANHANDLE

GRAY COUNTY—		
Empire, I. B. Hughey 1	34	3225
Gibson Oil Corp., J. B. Bowers 1	935	3130
Riley & Heck, Hopkins 1	*	3305
Wilcox et al, Combs Worley 2	85	3130
HUTCHINSON COUNTY—		
Prairie & Vacuum, Merchant 1	¶78	2540
Ralph & Baker, H. E. Smith et al 1	25	2805
Williams et al, J. M. Sanford 1	50	2858
HARTLEY COUNTY—		
J. E. McKanna, Farwell 1	*	3500
Shelton Estate 1	*	3385
WHEELER COUNTY—		
Texas Co., G. Beel 1	120	2740

WEST TEXAS

HOWARD COUNTY—		
Magnolia, Mary Chalk 6	85	1695
Henshaw et al, S. T. Eason 1	*	1925
Marland, Chalk 5-A	*	1628
UPTON COUNTY—		
Tidal, Burleson 2	10	2090

NORTH TEXAS DISTRICT

ARCHER COUNTY—		
Darr et al, Edwards 1	*	1504
C. B. Long et al, Helm 1	*	1604
Herkins et al No. 2	65	1776
CLAY COUNTY—		
Ashcroft et al, Stine Estate	*	1772
O. H. Foster, Sanzenbacker 1	*	1720
COOKE COUNTY—		
Bell Oil Corp., Koelzer 3	80	805
Camp-Hedrick & Oil Operators Trust, Kiers 1	35	1744
J. W. Hooser, Hyman 1	*	1803
Miller Drlg. Co., Koelzer 1	*	1747
JACK COUNTY—		
Buttram Pet. Co., Jones Est. 1	140	2056
Chandler et al, Ira Coats 1	*	535
Craig-Lowrie & Walton, Ira Coats 1	15	491
Foster & Erwine, Ball 1	*	901
L. M. Lamar, Moore 3	*	575
Madden & Hunt, Sloan 3	8	525
Shaw & Rathke, Culiers et al 2	100	2005
Tedford Bros., Richards & Lanier 3	10	495
FOARD COUNTY—		
Humble and Navarro, McAdams 1	*	4192
KNOX COUNTY—		
Humble, Goode 1	*	4543
THROCKMORTON COUNTY—		
Hoffer Oil Co., Matthews 4	15	1507
PALO PINTO COUNTY—		
Shaw et al, Gilbert 1	*	4065
McGinley et al, Sheppard 1	*	1152
WISE COUNTY—		
Orbit Oil Co., Milligans 1	*	735
MONTAGUE COUNTY—		
Humble, Hinton 1	80	805
YOUNG COUNTY—		
Wichita Prod. Co., Hamilton 1	*	1100
Nash & Windfohr, Hinson 1	*	190
E. C. Stovall, Fee 5	60	4295
7	30	4336
ARCHER COUNTY—		
Allday Oil Corp., Herron 1	*	1004
Burton et al, Farmer 1 "C"	70	1525
Consolidated Oil Co., Bearden 1	*	1101
Sun Oil Co., Andrews 2	*	1000
Texas Co., Wilhelm 1	*	1502
WICHITA COUNTY—		
Magnolia, H. Reilly 135	65	1337
S. L. C. Ramming 26	15	1713
WILBARGER COUNTY—		
Consolidated Oil & Cosden, Waggoner 1-B	*	1226
McCULLOCH COUNTY—		
McClung et al, Smith 1	*	100
Wagley et al, Williamson 1	*	1400

Would Lease Shale Plant

Rulison, Colo. — A California company is reported to be negotiating for a lease on the government experimental oil shale plant at Rulison, Colorado, and the plant may be started up again early next year. If the California company does not secure the plant, an appropriation of $150,000 is to be asked of congress for the purpose of continuing the experiments.

Hackberry Test Nearing Production Level

Houston.—Calcasieu Oil Company's Caldwell 2 at Hackberry, Cameron Parish, Louisiana, is getting down close to the depth at which the Caldwell 1 blew out late in August. On Monday of this week it was drilling at 3742 feet. The depth of No. 1 was 4003 feet, and six and five-eighths-inch casing being set at 3865 feet.

Various precautions have been taken to prevent a recurrence of the ill fortune encountered in the Caldwell 1, which blew out when preparations were being made to bail the hole, showing an estimated 25 million cubic feet of gas with a spray of oil. It subsequently caught fire and was a total loss. The No. 2 test is 250 feet west of the No. 1.

These tests are located on a dome discovered with the seismograph about a year ago. The dome is variously known as the Little Prairie Dome and the Kelso Bayou Dome. It is approximately two miles east of the old Hackberry dome, around which there has been unsuccessful drilling intermittently since about 1902 on the strength of natural indications.

Flow Increased in Nash Dome Well

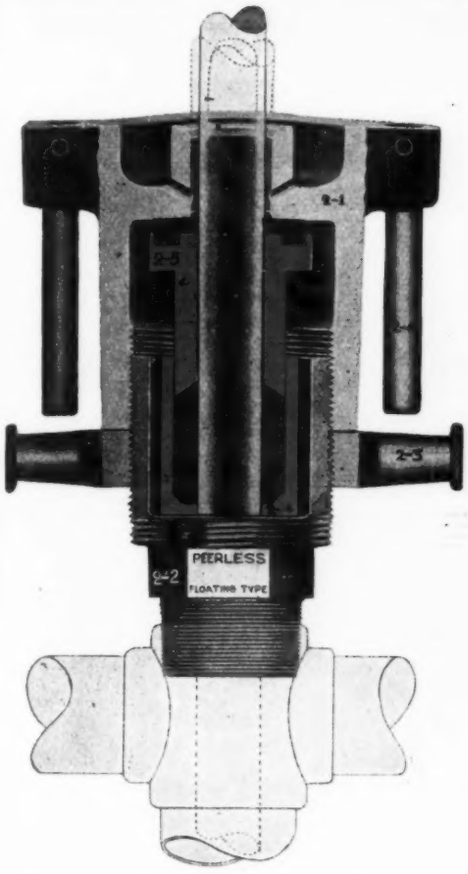
Houston.—Rycade Oil Corporation's Fritz Meier 4 at Nash Dome came in the latter part of last week flowing 560 barrels of pipe line oil, following deepening from 4100 feet, at which level it was a 40 barrel producer. In being deepened the hole was carried to 4295 feet, where it went into salt. It was then plugged back above the salt and the lower stratum of sand and is now producing from the sand in which it was originally completed.

Rycade has four other active tests at Nash. The Nash 12 is drilling at 6012 feet in gummy shale. Wisdom 16 is drilling at 3168 feet. Wisdom 17 is preparing to test at 3910 feet. The Fritz Meier 5 is coring sandy shale at 4242 feet.

Barbers Hill Well Makes 700 Barrels on Pump

Houston.—Mills Bennett Production Company and the Moody Corporation completed their Fee 9 at Barbers Hill late last week for an initial yield of 700 barrels on the beam. On Monday of this week the well was making 600 barrels, pumping and flowing. The depth of the hole is 3214 feet, the top of the oil sand being at 3185 feet. Production is pipe line oil, and tested 23.5 gravity.

Two other tests are drilling in the field. Humphreys Corporation's Kirby B-5 was at 4739 feet early this week in shale and lime, and Sam Hindman et al's Fisher 1 was drilling at 3736 feet, also in shale and lime.



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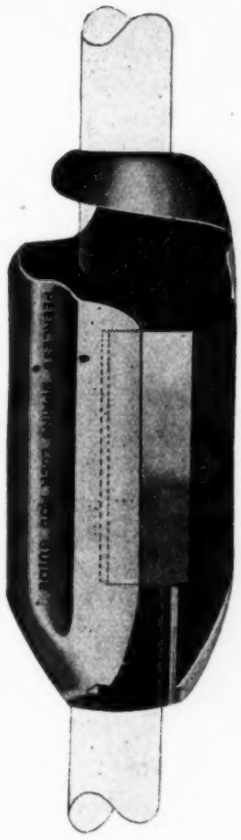
The McKissick Safety Block has never been involved in any accident. We build a block in every size for every need.



The Peerless Bronze Sucker Rod Guide. A two-piece sucker for guide—no clips, no rivets, no screws, no splinters, nothing to lose in the hole.

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Thousands of interested people examined these products at the International Petroleum Exposition—they asked us every imaginable question regarding them—they were genuinely interested. Of this interest, we are naturally proud—for such interest must be merited. There must be something about these products that draws and holds favorable attention.

If you have any problem that we might possibly solve—no matter how remote the problem may seem—write, wire, or call. Our representatives are at your service— they may be the means of saving—greater earning—added productiveness. We repeat—if you think that we might, in any way, be of aid to you, by all means communicate.

Peerless

SUPPLY COMPANY

Tulsa, Okla.

Say you saw it in The OIL WEEKLY

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week Ending Oct. 14	Previous Week	Total This Month	Total This Year	This Week Last Year	This Month 1926	Total Same Date 1926	Year Total 1926
Arkansas	3	6	9	285	12	27	974	910
California	16	16	32	1,011	34	64	1,298	1,293
Louisiana	16	8	24	581	24	37	1,199	1,318
Kansas	8	8	16	768	16	47	1,581	1,745
Oklahoma	48	28	76	3,166	88	151	4,371	5,165
Texas	93	109	202	7,371	207	483	10,753	12,158
Mountain States	24	..	24	386	8	32	660	....
Total	208	175	383	13,568	389	841	20,358	*22,589

*Does not include Mountain States.

OKLAHOMA

BEAVER COUNTY—O. H. Bonner et al, Maple 1, se ne, 22-4-25.

CIMARRON COUNTY—Ramsey Pet. Co., School Land 1, c se, 34-4-1.

CREEK COUNTY—Indep. O. & G. Co., Wolfe 3, se nw ne, 18-14-10. Curtis Oil Co. et al, Rhea 2, ne c sw se, 23-16-10. Nancybell Oil Co., Weaver 1A, c n l sw nw, 9-17-11. Skelly, Yellowhead 2, sw c se nw, 32-17-10. Kennedy & Horner, sw c se se, 13-17-10. Continental, Markarky 1, nw c se, 25-18-1. Bu-Vi-Bar Pet. Co. & Freeland, Strip 2, nw c se ne, 36-15-7.

GRADY COUNTY—Carter, Eason-Kerans 2, se sw se, 21-3-5. Scharmak 2, se sw sw, 35-3-5. B. A. Horton 5, nw ne ne, 17-3-5. Marland & Joe Ray Woods 3, ne se ne, 17-3-5; Ray-Horton 3, nw se nw, 8-3-5. Meridian Gas Co., Ramsey 1, c se ne, 10-4-8. Farley et al, Woods 1, nw se sw, 1-4-8. Noble & Westerfeld, McCaughtry 4, nw ne nw, 35-5-8.

GRANT COUNTY—Western States Oil Co., Swaggert 1, sw se se, 15-27-3.

KAY COUNTY—Dewey & Hoffer, Fox 1, se sw sw, 5-27-1. Marland, Chambers 4, sw c nw nw se, 9-25-2.

LOGAN COUNTY—Marland, Gragg 1, sw c ne, 16-18-4.

MUSKOGEE COUNTY—J. G. Graham et al, N. Stidham 4, c ne, 11-14-18. C. S. Hully, S. Deer 2, nw c sw sw, 36-15-18. J. M. Foltz, Taylor 1, c e l sw, 28-15-17. W. C. White et al, Sango 1, c sw sw, 28-15-15.

OKMULGEE COUNTY—McNutt & Davis, Eubanks 1, sw c ne ne, 17-13-14. A. C. Saint et al, Warren 1A, ne c sw nw, 12-14-12. Jordan & Thompson, Perryman 1, se sw sw, 1-14-12. F. D. Misener & Mid-Continent Pet. Corp., S. Lowery 1, ne c sw, 10-15-14. J. J. Lee & Scn Long 1, c e l nw ne, 17-15-12.

PONTOTOC COUNTY—W. R. Ramsey, Milner A2, ne nw sw, 17-5-8.

SEMINOLE COUNTY—Mid-Continent, Rose Manuel 1, ne se nw, 27-7-6. Magnolia Pet. Co., Dixon 1, sw c, 31-8-7. Sinclair Co., Cosar 1, sw nw nw, 36-8-6. Carter, Fish 7, nw sw nw, 36-8-6. W. B. Fine & Phillips Pet. Co., Pattey 2, se sw ne, 35-8-6; Pattey 1, ne sw ne, 35-8-6. Magnolia, Pattey 4, ne se ne, 35-8-6. Gypsy, Pattey 3, nw ne ne, 35-8-6; Pattey 2, se ne ne, 35-8-6. Amerada, Pattey 3, sw nw ne, 35-8-6; Pattey 2, ne nw ne, 35-8-6. Barnsdall, Davis 4, ne sw nw, 11-9-5.

STEPHENS COUNTY—Owen & Wood's Massey 4, nw c se nw, 12-2-8. Harry Hanbury, Taliaferro 5, sw nw sw, 27-1-8. Magnolia, Morgan 4, nw c ne se, 32-1-8. Smith & Law, Bymer 5, sw c nw ne ne, 31-1-8.

KANSAS

BUTLER COUNTY—Liggett et al, Figge 4, sw cor ne, 36-27-6.

CHASE COUNTY—Kirk et al, Crosby 1, sw cor nw ne, 23-22-9.

COWLEY COUNTY—J. A. Hull, Numan 2, nw c se sw, 24-32-4. Blue Stem Oil Co., Reynolds 2, sw c se, 33-32-7.

GREENWOOD COUNTY—Skelly Oil Co., Prather 2, sw c ne nw, 21-22-10. Theta Oil Co., Fankhauser 1, se c, 23-22-12. Rogers et al, Hayes 2, lot 9, blk 6. City of Eureka, 35-25-10. Robers et al, Wyant 1, se c nw, blk 16, Eureka Townsite, 2-26-10.

ARKANSAS

OUACHITA COUNTY—Exchange Oil Co., Berg 8, (owd,) 4-16-15, 660 ft s and 660 ft e of nw cor nw ne.

UNION COUNTY—Gulf, Hardy 43, (owd,) 4-16-15, center of w line se se. Ohio, Will Pumphrey 1, 1-17-14, 330 ft no and 510 ft e of center.

LOUISIANA

CADDO PARISH—J. R. Bahan, Abney 1, 31-17n-16w, 1663 ft n and 260 ft e of sw c. Belchic & Laskey, Shreveport, Sharp 3, 10-18n-16w, 660 ft n and 660 ft e of sw c sw se. J. W. Burton, Tr., Oil City, Caldwell 7, 18-21n-15w, 340 ft w and 600 ft n of se c nw; Caldwell 8, 18-21n-15w, 1020 ft n and 150 ft w of se c nw. Bussa & McGoldrick, Vivian, Bickham 7, 28-21n-15w, 300 ft s and 570 ft e of nw c. Ohio Oil Co., Thompson 1, 32-23n-16w, 660 ft n and 330 ft e of sw c fractional sec 32. Superior Oil Co., Camden, Ark., Youree 6, 26-20n-15w, 1650 ft w and 330 ft s of ne c.

CALCASIEU PARISH—Plummer Oil Co., Beaumont Texas, Read 1, 29-9s-11w, in sw c lot 5Koonce Subn., 30 ft from s and w line each way.

CATHOULA PARISH—Lochnagar O. & G. Co., Marsh-McMillan 1, 29-8n-6e, 143½ ft e and 53 ft n of sw c.

IBERIA PARISH—Louisiana Land & Explo. Co., Houston, Texas, Vermilion Bay A-1, chngd lcn, 20-15s-6e, 19,536 ft w and 9117 ft s of se c.

LA SALLE PARISH — Pima Pet. Co., Urania, Urania Lbr. Co. 10, 7-10n-2e, 150 ft s and 150 ft w of ne c sw ne. Tunica Pet. Co., Shreveport, L. & A. Oil So. 40, 15-7n-2e, 200 ft s and 200 ft w of ne c nw nw.

NATCHITOCHES PARISH — Lawson & Pharis, Shreveport, Clark & Morse Lumber Co. 3, 25-5n-6w, 100 ft s and 738 ft w of center.

OUACHITA PARISH — Southern Carbon Co., Monroe, Fairbanks 8, 38-19n-4e, 676 ft n and 1320 ft e of S cor between secs 3, 4 and 38 in sec 38.

RICHLAND PARISH—W. C. Feazel, Monroe, Hemler 1, 20-16n-6e, 1896 ft n and 665 ft w of se c; Hemler 2, 6-15n-6e, 660 ft s and 1980 ft e of nw c.

MOUNTAIN STATES

WYOMING

JOHNSON COUNTY—Murphy & Grove, O'Connor 1, nw 10-41n-80w.

PARK COUNTY—Producers & Refiners 1, ne 32-52-100. Sullivan & Henderson 1, ne 31-58n-99w.

LINCOLN COUNTY—California Pet. Corp., 21, lot 12, 3-26n-113w; No. 3D, lot 5, ne¼ 3-26n-113w.

SUBLETTE COUNTY—California Pet. Corp. 4L, 27-27n-113w; 5G, sw 34-27-113; 7F, 34-27n-113w; 5J, sw 34-27n-113w; 4G, sw 34-27-113.

COLORADO

JACKSON COUNTY—Continental Oil Co. 3, se 17-9n-78w.

LARIMER COUNTY—Union Oil Co. of Cal. 2, sw 30-10n-68w.

NEW MEXICO

CHAVES COUNTY—McQuigg Bros. 1, nw 7-5s-19e.

EDDY COUNTY—Geo. F. Getty 1, nw 14-7s-28e. Texas Prod. Co. 2, sw 25-16s-31e.

GUADALUPE COUNTY—Ike McNabb 1, sw 24-5n-16e.

OTERO COUNTY—Ohio Oil Co. 1, nw 25-17n-6w.

SAN JUAN COUNTY—T. C. N. Oil Co. 2, nw 9-29n-11w. H. L. Williams 2, ne 30-30n-15w.

SIERRA COUNTY—H. L. Williams 2, se 30-18n-8w.

MONTANA

FALLON COUNTY—Bull Dog O. & G. Co. 3, sw 2-9n-58e.

FERGUS COUNTY—Continental Oil Co. 12, ne 14-15n-29e.

UTAH

GRAND COUNTY—S. H. Cort 1, sw 14-20s-21e.

UINTA COUNTY—Western Venture Corp. 1, se 6-5s-21e.

CALIFORNIA

HUNTINGTON BEACH—Ben F. Mun, Mun 1, 10-6-11. M. W. McVey, McVey 2, 10-6-11. C. C. Loftin 3, 10-6-11. The Ohio Oil Co., Slater 1, 34-5-11. Miller & Van Allen, Miller-Van Allen 1, 10-6-11.

INGLEWOOD—Brownmoor Oil Co. 8, 7-2-14.

LONG BEACH—Superior Oil Co., Crews 3, 29-4-12.

NEWPORT—Interstate Oil Corp., Norris 1A, 17-6-10. Pet. Securities Co., Fairview 1, 3-6-10.

PIRU—J. B. Hedrick 1A, 33-4-18.

SAN MATEO COUNTY—Morris Schwartz 1, 19-9-4.

SEAL BEACH—White Oil Co. 1, 3-5-12. Standard, San Gabriel 16, 3-5-12.

VENTURA—Associated, Lloyd 100, 23-3-23. Shell Co., Edison 21, 28-3-23. Stan Pet. Co., Star-Canet 1A, 19-3-23.

TEXAS

ARCHER COUNTY—Consolidated Oil Co., Wichita Falls, Netherton 4, blk 95, Amer. Trib. sur, center. Harry Hines, Wichita Falls, Farmer 1, S 17, blk 18, Anderson sur, 150 ft from n and w lines; Garvey 1, blk 66, Club Ranch sur, 150 ft from n and 1950 ft from e line. Burton Drilling Co., Wichita Falls, Farmer 1, blk 1, Anderson sur, 150 ft from n and 424 ft from w line.

AUSTIN COUNTY — Humble, Houston, Payne 1, W. C. White sur, 3900 ft from nw and 500 ft from ne line.

BROWN COUNTY—Nimrod Oil Corp. & Atlantic, Dallas, King 1, S 4, W. Williams sur, 150 ft from n and w lines; 5, same sur, 150 ft from n and e lines. Sinclair, Fort Worth, Smith 9, S 1, S. A. & M. G. sur, 161 ft from e and 450 ft from s line; 8, same sur, 301 ft n of No. 5.

BREWSTER COUNTY—J. M. Hickey, Alpine, Jackson 1, S 182, blk 9, G. H. & S. A. sur, 200 ft e and 1200 ft from s line. Kimball 1, S 204, blk 9, G. H. & S. A. sur, 1200 ft from n and 1380 ft from e line.

(Continued on page 81)

Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

Beaumont Iron Works Company
Dreadnaught Rotary Equipment, Water-Cooled Drawworks, Pumping Hoists, Traveling Blocks, etc.

Carbic Manufacturing Co.
Acetylene Gas Generators and Welding Equipment.

Donovan Boiler Works
Oil Country Boilers and Tanks

Frick-Reid Service Belting
Rubber Covered and Friction Surface

Jensen Bros. Mfg. Co.
Pumping Jacks

National Transit Pump and Machine Co.
Power and Steam Pumps

J. P. Ratigan
Grips, Clamps, Beam Hangers

Joseph Reid Gas Engine Company
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

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Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

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4. Bored cross-head guide.
5. New governor of Reid design, enclosed and running in a bath of oil.
6. New intake valve on top of cylinder.
7. Improved speed wheel arrangment.
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10. Unprecedented speed range.

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Supply Co.
Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi, Stores Everywhere.
East of the Mississippi, The Frick & Lindsay Co.

WILDCATS FROM ALL SECTIONS

SOUTHERN CALIFORNIA

BOYLE HEIGHTS—Haskell M. Greene's 1, sd tr 6¼-in 2840 ft, td 2995 ft.

CLAREMONT—Claremont O. & G. Co.'s 1, sd 1130 ft.

DAVIDSON CITY—California Well Drilling Co.'s 1, dr out cmt plug 6510 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s 1, sd 5510 ft.

EL SEGUNDO—Ryder Synd.'s El Segundo 1, sd 2300 ft. Southern California Well Drilling Co.'s Matteson 1, sd 4865 ft.

FAIRVIEW—Pet. Securities Co.'s 1, block H, lcn.

GARDENA—Circle O. & G. Co.'s Pomeroy 1, sd 4130 ft.

HAWTHORNE—San Clemente Oil Co.'s 1, dr 4875 ft. J. E. O'Donnell's 1, dr 3930 ft.

HUNTINGTON BEACH—Miley Oil Co.'s (Calnan) 1, dr in brown shale 4875 ft. Ohio Oil Co.'s 1, ne¼ 35-5-11, sp.

INGLEWOOD—Allenson & Co.'s 1, sd 3500 ft. Hurst & Compton's 1, rigging rotary.

LANCASTER—John B. Harding's La Loma 1, sd 700 ft.

MAYWOOD—Magnolia Pet. Synd.'s Tweedy 1 sd 4450 ft.

MONTEREY PARK—Monterey Park Pet. Co.'s Browning 1, oil showings 2115 ft.

MONTEBELLO—Rotary Ail Drill Co.'s Germain 1, sd 1400 ft.

NEWHALL-SAUGUS—W. W. Stabler's Castaic 1, sd 3408 ft. Thomason-McCoy's S. F. Canyon 1, sd 1610 ft.

OLIVE—Standard's C. B. 1, dr 4115 ft.

ORANGE—Chas. A. Son's Pinherton 1, dr 2560 ft.

PLACENTIA—Shell's Allec 1, dr 4216 ft.

PORTRERO—Associated's Cypress 1, dr 4260 ft, some gas, little oil.

PUENTE HILLS—Anchor Pet. Co.'s Hudson 1, dr 1925 ft.

SAN FERNANDO—Shell's Mission 1, dr 4272 ft.

SAN JOSE HILLS—Bardeen Oil Co.'s Didier 3, recmt 2030 ft, td 2255 ft. D. & B. Oil Co.'s Amar 1, re-plugged 2600 ft, td 4380 ft.

SAN JUAN CAPRISTANO—O. K. Carr's Forster 1, dr 3975 ft.

TELEGRAPH CANYON—Quadra Pet. Co.'s M. J. M. M. 1, sd 4210 ft.

WATTS—Southwest Pet. Co.'s Ramsaur 1, sd 4210 ft.

WATSON—White Behr Cons. Oil Co.'s 1, sp.

YORBA—Standard's Y. L. W. Co. 1, dr 4056 ft. Securities' Kraemer 1, dr 2991 ft.

RIVERSIDE COUNTY — Spindle Top Oil Synd.'s Salton 1, dr 2786 ft. Trabuco Oil Co.'s 1, dr 2479 ft. Hemet Pet. Co.'s Ward 1, sd 1408 ft.

SAN BERNARDINO COUNTY — Colton Terrace Oil Co.'s 1, dr 1470 ft. Como Oil Co.'s Cajon 1, sd 2845 ft. Western Pacific Oil Co.'s 1, sd 3005 ft.

NORTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
ANTELOPE PLAINS—		
W. H. Davis 1, 13-26-17	*	3245
GOLETA—		
Barnsdall Oil Co., Edwards 1	250	2485

FRESNO COUNTY

CLOVIS—Fresno-Madera Oil Co.'s 1, 18-12-21, dr 3213 ft.

KETTLEMAN—Superior Oil Co.'s 1, 26-21-17, dr 3707 ft.

NORTH COALINGA—Potter-Esplin's 1, 6-16-14, rig completed.

KERN COUNTY

ANTELOPE PLAINS—W. H. Davis' 1, 13-26-17, abn 3245 ft.

ADOBE CANYON—Cal. Pet.'s Glide 1, 25-27-28, lcn. Superior Oil Co.'s 1, 13-27-27, rigging rotary.

BAKERSFIELD—Pacific Eastern Prod. Co.'s Union Avenue 1, dr to 4500 ft, plugged back to 4393 ft for another test.

BELRIDGE—Zurich Oil Co.'s 1, 18-28-22, co 1325 ft.

BUTTONWILLOW — Milham Explo. Co.'s Kern 1A, plug 3425 ft, td 4660 ft, gas well; Salisbury 1, 7-28-24, sd 4250 ft. McAdam's et al's 1, 26-29-23, cmt 1800 ft.

COMANCHE POINT—Kern 29 Oil Co.'s 1, 29-31-30, sd 2415 ft.

DELANO — Chanslor-Canfield Midway's 1, 23-25-27, co 2300 ft, oil and gas showings. North American Consolidated's 1, 5-25-25, dr 2363 ft.

DEVILS DEN—Midway Northern Oil Co.'s 1, 25-26-18, oil in hole, td 2340 ft.

EDISON—General Pet. Corp.'s 1, good oil showing 2440 ft, dr 2850 ft.

FRUITVALE—Pacific Eastern Prod. Co.'s 1, 21-29-27, rigging rotary.

GREENFIELD—Mays & Valencia's 1, 31-30-28, rig completed.

GOULD HILLS—Bomke & Ball's 1, 12-29-20, dr 1230 ft. California-Kentucky Oil Co.'s 1, 8-29-21, oil showings around 1600 ft. Mendocino-Midway Oil Co.'s 1, 28-29-21, sd 2930 ft. Rhoade Oil Co.'s 1, 20-29-21, plug 1460 ft, will test on pump; 2, 20-29-21, rigging up. L. E. Westrich's 1, 191-29-21, sd 1775 ft.

McKITTRICK—Abbott Pet. Co.'s 1, 2-30-21, sd 1990 ft. Lacy-Esper Pet. Co.'s 1, 18-19-22, sd 3265 ft. Keefe & Morrison's 6A, 8-30-22, making gas 2250 ft. McKittrick Hills Oil Co.'s 1, 18-30-22, co 2300 ft, td 3250 ft. Ozona Oil Co.'s 1, 27-29-21, repairing 8¼-in cas 1690 ft. Ridge Oil Co.'s 1, 13-30-21, sd 4045 ft.

MON BLUFF—Miocene Oil Co.'s 1, 34-27-28, rig. Shell's 1, 3-28-28, dr 2832 ft.

NORTH MIDWAY—Gore Oil Corp.'s 1, 34-30-22, sd 1350 ft. Electric Pet. Co.'s 1, 34-30-22, sd 1610 ft.

SHALE HILLS—Huntington & Hawthorne's 1, 35-26-18, will resume dr 600 ft. Nelson & Mountford's 1, 18-27-19, sd 2690 ft.

SUNSET—Raleigh Oil Co.'s 1, 8-11-23, oil sand 2600 ft.

TEMBLOR—Fortuna Oil Co.'s 1, 28-32-23, sd 2655 ft. Hovey Hills Oil Co.'s 1, 19-31-22, sd 2450 ft.

TEHACHAPI-MOJAVE—C. R. Asmussen's 1, 23-11-11, sd 1510 ft. Crusader Oil Co.'s 1, 21-10-10, testing water shutoff 2254 ft. John B. Harding's 1, 5-10-10, sd 1050 ft.

KINGS COUNTY

KETTLEMAN—Associated's 1, 12-23-18, sd 2043 ft. Bolsa Chica Oil Co.'s 1, 30-23-19, sd 3200 ft. Chanslor-Canfield Midway's 1, 17-24-19, fsh for dr pipe 5010 ft. General Petroleum Corp.s' 1, 4-24-19, fsh 3800 ft; 2, 22-26-18, sr 4790 ft, gas at 4600 ft. Milham Explo. Co.'s 1, 2-22-17, dr 4666 ft. Hugh McPhail's 1, 13-24-18, dr 2100 ft. South Coalinga Oil Co.'s 1, 35-24-19, sd 1860 ft.

SANTA BARBARA COUNTY

GOLETA—California-American Holding Co.'s 1, lcn. Graham Loftus Oil Co.'s Orella 1, sd 1600 ft. J. J. Rekar's La Petera 1, dr 1888 ft.

BUELLTON — Buttram Brothers' Odin 1, rigging rotary.

SANTA BARBARA—H. R. Dabney's Wright 1, sd 136 ft. Channell Oil & Development Co.'s 1, dr 5633 ft. Hollywood Oil Synd.'s 1, sd 1300 ft.

SANTA INEZ—San Marcos Synd.'s 1, 34-7-29, dr 2343 ft.

SUMMERLAND — Summerland Oil Co.'s Becker 1, trying for water shutoff 3030 ft.

VENTURA COUNTY

AVENUE—Associated's Dabney-Lloyd 1, co 6355 ft. Star Petroleum Corp.'s Star Canet 1, sdtr pipe 3840 ft, td 5240 ft.

CAMARILLO — Standard's Camarillo 1, trouble with dr pipe 5000 ft, td 5590 ft.

FILLMORE—Sespe Oil Co.'s Smith 2, sd 4003 ft.

HOPPER CANYON—Bishop-Buckeye's 2, sd 200 ft. Hopper Canyon Oil Co.'s 2, sd 5005 ft.

MOORPARK—E. A. Parkford's Lloyd 1, fsh for dr pipe 3860 ft. Shell's Berylwood 1, dr 5431 ft.

RINCON—Chanslor-Canfield Midway's Hobson 1A, dr stopped at 7000 feet for prod test; Hobson 1B, dr 5575 ft. Montecito Oil Producers' 1, 13-4-25, testing 6¼-in cas 3020 ft, td 3450 ft. Pan-American's State 1, dr 3165 ft, oil sand from 2660 to 2800 ft. Scott Pet. Properties' 1, 35-4-25, dr 325 ft.

RED MOUNTAIN—Miley Oil Co.'s 1, 7-3-23, dr 766 ft.

SANTA PAULA—W. W. Bryant's Anlauf 1, 21-4-21, dr 100 ft.

STRATHERN—Shell's Jennings 1, lcn.

SOUTH MOUNTAIN—Ring Pet. Corp.'s Converse 1, cmt plug at 3525 ft, td 3950 ft, will dr out plug for test.

SULPHUR MOUNTAIN — Geiss & Bradford's 1, 21-4-22, will test for oil at 2000 ft.

SQUAW FLATS—Border Oil Co.'s 1, sd 675 ft.

TIMBER CANYON—San Pedro-Point Fermin Oil Co.'s 1, 13-4-21, dr 300 ft.

MISCELLANEOUS

SAN LUIS OBISPO COUNTY—Brinkman Oil Co.'s 1, 22-31-21, sd 720 ft. Butler & Richie's 1, 7-32-22, sd 700 ft. Panorama Oil Co.'s 1, 7-31-21, sd 2033 ft. Richfield Oil Co.'s 1, 10-29-17, dr 1050 ft.

SAN MATEO COUNTY—Shell's Cowell 1, 8-6-5, dr 4750 ft.

SONOMA COUNTY—Shell's Murphy 1, 8-5-7, dr 6341 ft; Murphy 2, dr 1730 ft.

TULARE COUNTY—Birch Oil Co.'s 1, 13-21-26, fsh 2040 ft. Ducor Drilling Co.'s 1, 29-23-27, plugging hole to 3900 ft, td 4160 ft. Federal Explo. Co.'s 1, test showed some oil at 5350 ft. Water broke in and will be recmtd.

MOUNTAIN STATES

NEW MEXICO

CURRY COUNTY—Hasson Pet. Co.'s Laird 1, 22-8-36, sp and sd. Frio Oil Co.'s Sunders 2, 11-5n-35, sd at 1240 ft. Clovis O. & G. Co.'s Hoskinson 1, 21-3n-36, drg below 3165 ft.

CHAVES COUNTY—Gibson Oil Corp.'s Forsyth 1, 8-11-23, sd at 675 ft. Buffalo-Roswell 1, 24-11-27, sd at 4260 ft. Texas Prod. Co.'s Wilson 1, 29-17-18, drg at 4765 ft. Twin Mounds Drlg. Co.'s Fahrlander 2, 11-6-27, sd at 80 ft. Arena Oil Co.'s 1, 18-13s-31e, fsh tools at 750 ft. McQuigg Bros.' Neis 1, 7-5s-29e, rigged.

DE BACA COUNTY—Trigg Synd.'s 1, 27-4n-22, sd at 300 ft. Barber-Woods Oil Co.'s Woods 1, 6-4-20, sd at 390 ft.

GUADALUPE COUNTY — Hanchett Oil Co.'s Rutherford 1, 24-8-24, drlg below 3000 ft. Union Pet. Co.'s McMullen 1, 24-5n-16, sd at 235 ft to straighten titles. Navajo Oil Co.'s Goard 1, 10-3-17, sd at 2540 ft.

LEA COUNTY—Midwest Ref. Co.'s Hobbs 1, 9-19s-38e, mvg in material.

McKINLEY COUNTY—Smart & Reid, 7-17-9, bldg rig. Inland Oil Corp., 22-18-10, underreamer fast in hole at 815 ft. S. Dysart 1, 21-14-9, drlg below 1540 ft. Continental Oil Co.'s Carrica 1, sw 9-17n-7w, drlg 1250 ft. Jenkins Oil Co. 1-16n-9w, drlg 400 ft. Williams et al 2, 30-18n-8w, drlg below 800 ft. Ohio Oil Co.'s Nightingale 1, 25-17-6w, drlg 1200 ft. Reliance Oil Co.'s Hanchett 1, 16-17-9, undrr, td 805 ft.

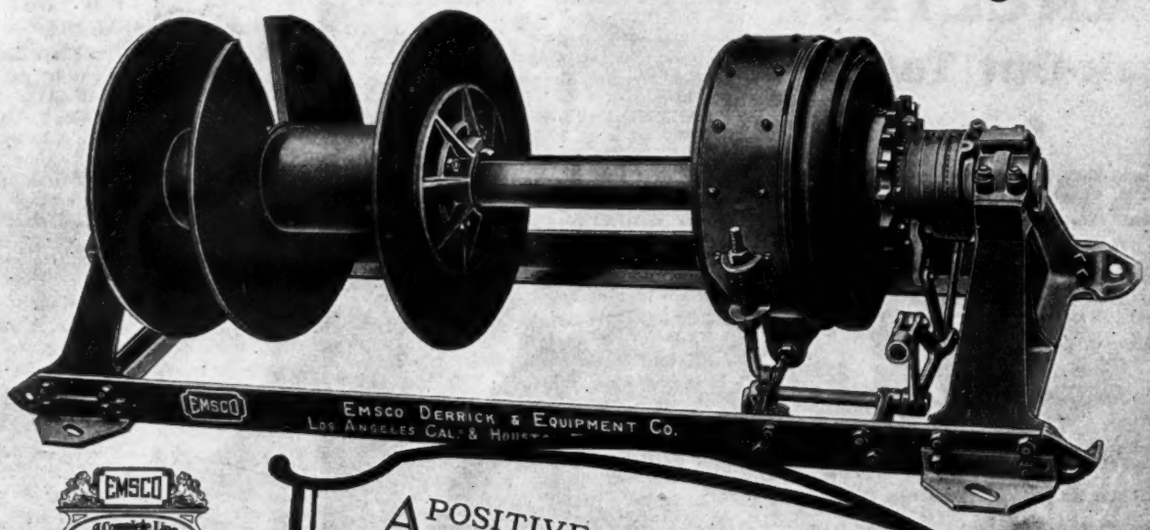
QUAY COUNTY—Gibson Oil Corp. 1, 24-8-32, set 8¼-in at 3500 ft, td 3502 ft. Ohio Oil Co.'s Jordan Ridge 1, 24-7-29, drlg at 3905 ft.

TORRANCE COUNTY—San Juan O. & G. Co.'s Minerman 1, 32-7-10, sd at 2650 ft. San Juan O. & G. Co.'s Barnsdall 2, 20-6-19, drlg below 4730 ft. Duran Dome Oil Co.'s Duran Dome 1, 31-2-14, fsh lost tools at 1400 ft. F. G. Wilson, Tr.'s Pace 1, 12-6n-27, drlg 2025 ft.

SAN JUAN COUNTY—Continental Oil Co.'s Munoz 17, 2-29-19, redr 3500 ft. Portage O. & G. Co. 3, 25-31-13, drlg 1185 ft. Portage O. & G. Co.'s Glade 1, 24-30-13, cas off water at 1260 ft. Kansas-Colorado Oil Co.'s Atterberry 1, 24-31-11, wrg for drlg line at 1860 ft. Senate Oil Co.'s Lanier 1, 34-29-11, mvg in heavier equipment to deepen from 1745 ft. T. C. N. Oil Co.'s Lenier 1, 9-29-11, mvg equipment. Huntington Park Oil Co. 2, 29-30-9, drlg at 4020 ft. R. M. Smith's Abrams 2, 23-29-11, drlg below 600 ft. Huerfano Oil Co.'s Wiltbank 1,

EMSCO

Portable Chain Driven Sand Reel



EMSCO
A Complete Line of Better Oil Well Equipment

A POSITIVE yet highly flexible unit for speeding up bailing operations. Mounted on skids, it saves time in rigging up and is quickly placed in any desired position. The complete unit with wire line spooled on the reel, can be quickly taken out and moved from one rig to another. The chain drive eliminates all frictional contact between sand reel and band wheel, reducing wear on band wheel and machinery supports and prolonging life of belt. Reduces investment in equipment and requires less power to operate. The saving in fuel consumption is approximately fifteen per cent.

The Emsco *Portable* Chain Driven Sand Reel represents another progressive advance in oil well equipment. Complete descriptive literature furnished on request.

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Derrick & Equipment Company
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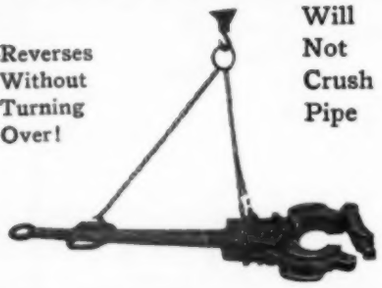
EMSCO STEEL EQUIPPED WELLS ARE SAFE

—Reverses Without Turning Over!



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STANCLIFF
Break-Out Tongs
for
SPEED

There's no "lost motion" with these tongs. One handle holds jaws to FIT any size pipe. Low priced—long-lifed—reliable!

Write for Descriptive Literature

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Marathon Fold
—West Texas

5000 acres Val Verde County.

10,000 acres SW. Crockett County. 10 yr. paid up, adjoining big company tracts.

1500 acres along Pecos River.

1500 acres NE. Terrell County, paid up for 10 years.

Upton County scattered tracts.

Pecos County scattered tracts.

3000 acres eastern Irion County.

4000 acres Loving County.

Royalties in various West Texas Counties.

Prices and maps upon request. Time for examination allowed.

C. W. WEBSTER
Petroleum Bldg., Ft. Worth, Texas
Reference: Mercantile Agencies

25-29-11, std. Aztec Oil Dev. Co.'s Finch 1, 15-29-11, repairing equipment, td 650 ft.

SOCORRO COUNTY—Abo Oil Co. 1A, 14-3s-6e, set 12½-in at 600 ft and sd to reorganize.

VALENCIA COUNTY—Acme Oil Co.'s New Mex.-Ariz. Land Co. 26-6-3, td 1962 ft, bldg stnd rig. Stone et al's Perrin & Swisher 2, 25-7-2, fsh pipe at 1967 ft.

UNION COUNTY—Sun State Pet. Co.'s Paso Monte 1, 14-24-30, sd at 2977 ft. Operations to be resumed by Blankenship Pet. Co.

COLORADO

BOULDER COUNTY—Left Hand Oil Co.'s Prechtl 1, 34-3n-70, recem 4¾-in at 1954 ft. Essok Oil Co.'s Martin 1, 5-1s-70, drlg 4380 ft. Repollo Oil Co.'s Nichols 1, 32-1n-70w, drlg 1200 ft.

FREMONT COUNTY—Fremont Leasing & Holding Co. 1, 2-19-70, fsh. Columbia Oil Co.'s Sheridan 1, 2-18-70, sd at 2240 ft.

LAS ANIMAS COUNTY — Parker Club, Inc.'s Adams 1, 32-34-56, drlg below 3600 ft. Foley & Goldsworthy's Government 1, 11-30-60, drlg at 1950 ft.

LA PLATA COUNTY—Klem Synd.'s Ferguson 1, 12-34n-7w, sd at 2000 ft. Collins et al's Aspaas 1, 10-34n-11w, dr at 700 ft.

LOGAN COUNTY—Northeastern Colorado Oil Co.'s State 1, 36-8-55, cas set at 5010 ft.

MOFFAT COUNTY—Ohio Oil Co.'s Kuykendall 1, 22-21n-11w, dr at 1300 ft. Reiter-Foster Oil Co.'s State 1, 16-12-100, dr at 1520 ft.

MONTEZUMA COUNTY—Coon & Cotton's Hall 1, 9-35n-13w, dr 560 ft.

RIO BLANCO—Texas Prod. Co.'s Freeman 1, 27-3-94, dr out cem at 4945 ft.

ROUTT COUNTY—Great West. Oil Co.'s State 1, 17-6n-86w, sp 150 ft.

SAGUACHE COUNTY—Cook, Weber et al's State 1, 27-41n-10e, hole partly cleared, td 4300 ft.

WELD COUNTY—Platte Valley Pet. Co.'s Patterson 1, 24-6-61, dr 3310 ft. Platte Valley Pett. Co., 5-8-56, sd at 250 ft.

WYOMING

BIG HORN COUNTY—Agate Oil Co., ne 13-51-93, dr. Utah Southern 3, 29-56n-97w, undrr 8¼-in at 2400 ft, dr ahead. Wisconsin-Himes, 9-34n-94w, mvg tools to clean out and deepen.

CARBON COUNTY—Graybeal Synd., 16-28-91, coring with rotary, td 4000 ft. Pacific-American Oil Co., 31-25-91w, lcn.

CONVERSE COUNTY—A. A. Tylee, ne 8-32-72, rig. Criterion Oil Co.'s Irvine 1, 5-31-70, dr. John Ackard's McKay 1, 21-31-69, dr below 2750 ft.

FREMONT COUNTY—Producers & Refiners' Muskrat 1, 34-34-92, dr 675 ft. Texas Production Co.'s Alkali Butte 1, 1-33-92, sp and sd. Zola Oil Co.'s Crook's Gap 1, twp 27, range 92, sidetr at 3000 ft, td 3492 ft. Iowa-Wyoming Inv. Co., 30-1s-2e, testing at 1400-1465 ft.

JOHNSON COUNTY—Fairway Oil Co.'s Crazy Woman 1, 7-47-82, dr. Tarrant Synd. 2, 17-46n-82w, undrr at 3615 ft. Murphy & Grove, 10-41n-80w, dr 400 ft.

NATRONA COUNTY—North Casper Creek O. & G. Co., se 1-36-82, resuming. Combs Inv. Co., 1239-78, mvg in material.

NIOBRARA COUNTY — Penn.-West. Pet. 13-35n-62w, resuming at 800 ft. Hollingsworth Bros., 17-39n-60w, drg up cas shot off in an attempt to sidetrack lost tools.

PARK COUNTY—Platte River Drlg. Synd., se 12-26-67, dr. Union of Cal.'s Taylor 1, 22-47-101, dr 900 ft. Fred G. Ostland's Hoodoo Ranch 1, 53-51-102, dr 1000 ft. Honolulu Oil Corp.'s Four Bear 1, 29-48-106, set 15½-in at 750 ft. Ralph Arnold & Chas Mau's Frannie structure, delayed in resuming at 1800 ft, waiting for electricity from the Montana Power Co. line.

PLATTE COUNTY—Walter Adams, Tr., sec. 13-25-66, resuming at 1650 ft, 6¼-in cas following.

SWEETWATER COUNTY — Boar's Tusk Oil Co., 16-23-104, dr below 1000 ft. Prairie O. & G. Co.'s Tucker 1, 18-13-99, straightening hole at 340 ft. P. & R. Corp.-Carland Oil Co. of Colorado, 26-20-104, rigged.

WASHAKIE COUNTY—P. & R. Corp.'s Tensleep 1, 13-46-89, cmt at 1925 ft.

WESTON COUNTY—Allen Oil Co. & Olympic Ref. Co., ne 15-44-64, rigging up.

UINTA COUNTY—Uinta Oil & Dev. Co., in town of Evanston, dr 700 ft.

LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Woodley & Collins, Farrington 1, 23-23-12	•	3106
CADDO PARISH—		
Lewis Oil Corp., Vespy 9, 15-21-15	•	....
NATCHITOCHES PARISH—		
Lawson & Pharris, Wise 1, 28-5-6w	•	1412
WINN PARISH—		
Dodge et al's Tremont 1, 35-13-3w	•	1558

BIENVILLE PARISH—B. J. Forrest's Perritt 1, 11-17-6, dr 2170 ft. Lake Bistineau Gas Co.'s State 1, 16-16-10, set 10-in at 200 ft.

BOSSIER PARISH—Bahan & Davis' Dodson 1, 15-23-12, set 12½-in at 300 ft. Bethany O. & G. Co.'s Dodson 2, 16-23-12, set 6-in at 3080 ft. R. L. Crook's Larkin 7, 14-19-11, set 6-in at 362 ft. Doern et al's Bollinger 1, 9-22-11, dr 2300 ft. H. S. Goodwin's Tr.'s Curtis 1, 2-16-13, dr 1220 ft. Hamiter et al's Hamiter 1, 10-23-13, rig. Humble's B. & W. 30, 15-19-11, r 4219 ft. Jensen et al's Hale 1, 17-18-11, set 6-in at 1221 ft. Magnolia's Dodson 1, 16-23-12, set 8⅛-in at 3082 ft. Z. Roberson 1, 23-23-12, dr 2485 ft; G. W. Roberson 1, 26-23-12, lcn. J. S. McCullough Tr.'s Hodges 3, 25-16-12, wosr 1558 ft. Northwest La. Gas Co.'s Mays 1, 22-23-12, dr 2715 ft. Sligo Synd.'s Smith 2, 24-17-12, set 12½-in at 833 ft. Sales & Walker's Bollinger 3, 30-23-11, arr to test 3081 ft. The Texas Co.'s Wilkinson 1, 26-23-12, testing 2687 ft. Triangle Drlg Co.'s Sentell & Dickson's 1, 3-20-13, dr 2000 ft. Walker et al's Antrim 1, 28-23-12, sd 1360 ft. Woodley & Collins Lincoln 1, 21-16-10, dr 1900 ft.

CADDO PARISH—Arkansas Fuel Oil Co.'s Lane 2, 13-21-15, dr 3679 ft; Huckaby 1, 14-21-15, wosr 3906 ft; Bashara 2, 23-21-15, testing 2635 ft. Belchic & Lasky's Sharp 2, 10-18-16, set 6-in at 891 ft. Bethany O. & G. Co.'s Offenhauser 1, 1-20-16, wosr 2260 ft. J. R. Bahan's Abney Est. 1, 31-17-16, set 10-in at 112 ft. J. O. A. Carper Tr.'s Hammock 1, 27-18-16, set 10-in at 120 ft. Dixie Oil Co.'s C. M. L. 9, 23-21-15, dr 3461 ft; Files Mabry B-6, 14-21-15, arr to set cas 3695 ft; Slattery 10, 27-21-15, sd 4106 ft; Noel A-2, 13-21-15, dr 3965 ft; Robertshaw 89, 14-21-15, blg 3780 ft; Robertshaw 90, 14-21-15, set 8-in at 2588 ft; Huckaby 4, 11-21-15, dk. W. W. Dodson Rives 6, 5-20-16, wosr 1866 ft. Double I Oil Co.'s Watkins & Lane 7, 27-21-15, dk. Falcon Drlg Co.'s Schmidt 1, 27-20-15, wosr 2292 ft. T. D. Gray et al's Hart 1, 29-21-16, set 4½-in at 2228 ft. Green wood Prod. Co.'s McCutcheon 1, 15-17-16, set 6-in at 2536 ft; Agurs 3, 6-16-16, set 10-in at 79 ft. Gulf's Herndon 11, 15-21-15, lcn. Golden Rod Oil Co.'s Hampton A-1, 15-21-15, sd 4050 ft. Haynes Bro.'s Murray 2, 14-21-15, dry at 3664 ft; Spell 2, 15-21-15, set 8⅝-in at 2542 ft. Magnolia's Bell 2, 4-17-16, lcn. J. W. Furrh 1, 28-18-16, arr to cmt off bottom 1765 ft; J. Furh 1, 32-18-16, set 13⅜-in at 212 ft; Dillon 18, 24-21-15, dk; Dillon 21, 23-21-15, lcn; Robertshaw 21, 23-21-15, recmted 8⅝-in at 3600 ft; Robertshaw 22, 23-21-15, dk; Hampton A-8, 15-21-15, dr 2190 ft. Ohio Oil Co.'s Aaron B Land Co. 1, 32-23-16, sd 1553 ft; Plum 1, 32-23-16, sd; 619 ft; Smith 25, 12-21-15, sd 4750 ft. Palmer Corp.'s Sellington 1, 17-21-14, arr to test 3098 ft. Pittsburgh O. & D. Co.'s Herndon 1, 15-21-15, sd 3946 ft. D. C. Richardson's Youree-Randolph 5, 13-20-15, wosr 2266 ft. Shreveport Oil Corp.'s State 1, 23-21-16, dk; State 2, 27-21-15, sd 2400 ft. Simplex Oil Co.'s Thomas et al's 3, 15-20-15, wosr 2355 ft. Standard's Stiles 189, 27-21-16, wosr 1836 ft; Hart 15, 34-21-16, set 6-in at 1815 ft. Superior Oil Co.'s Youree 6, 26-20-15, wosr 2301 ft. The Texas Co.'s C. M. L. 47, 23-21-15, sd 3657 ft; C. M. L. 49, 23-21-15, testing 3625 ft; C. M. L. 50, 23-21-15, set 8⅝-in at 3573 ft; C. M. L. 51, 23-21-15, sd 3580 ft; Mabry 10, 15-21-15, sd 3690 ft; Herndon 7, 14-21-15, dk; Herndon 8, 14-21-15, set 8¼-in at 3598 ft; Herndon 9, 14-21-

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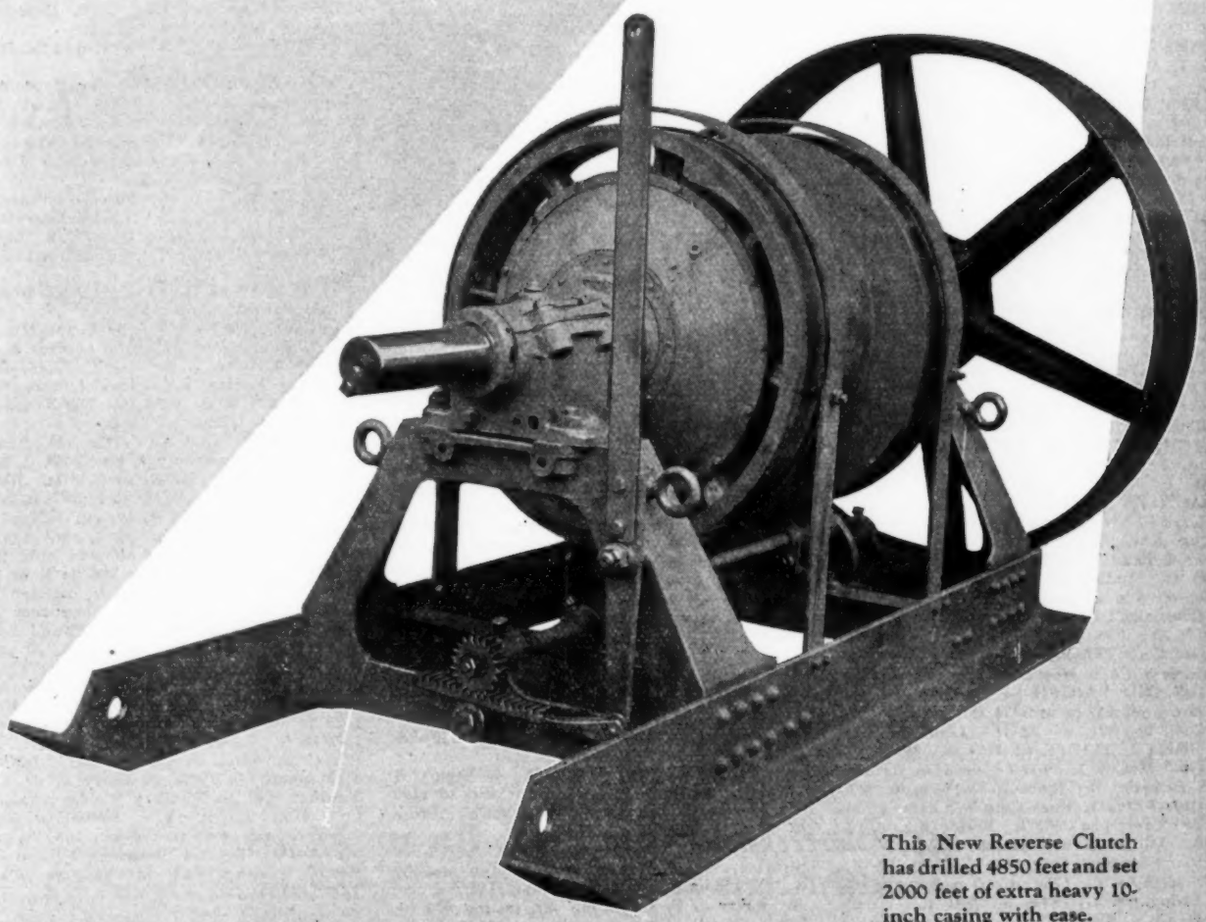

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15, set 8¼-in at 3580 ft; Herold 9, 14-21-15, blk 3640 ft; Herold 10, 14-21-15, sd 3453 ft; Raines 19, 15-21-15, sd 3868 ft; Noel B-14, 14-21-15, set 10-in at 2600 ft. Tubbs et al's Hines 1, 16-14-16, sd 1241 ft. Woodley Pet. Co.'s Knight B-3, 11-15-12, arr to deepen 3466 ft. Woodley & Collin's McVey A-1 (formerly reported No. 2), 23-19-14, rig.

CALDWELL PARISH—Grayson Oil Co.'s Crockett 1, 6-12-4, sd 2692 ft. Southern Crude Oil Purch. Co.'s Caldwell L. & T. Co. 8, 5-13-5e, dr 1750 ft.

CATHOULA PARISH—S. D. Hunter's Tensas Delta 3, 4-9n-8e, dr 2028 ft. Lochnager et al's Beazley 2, 26-9-6e, set 6-in at 3114 ft.

CLAIBORNE PARISH—Magnolia's Lee 1, 16-22-8, set 8¼-in at 4009 ft.

DE SOTO PARISH—American Controlled Oil Co.'s Lanier 1, 7-11-11, set 10-in at 180 ft. J. H. Askew Richardson 1, 25-13-11, dr 2482 ft. Chal Daniels et al's Frost Johnson 1, 1-11-16, sd 100 ft. Dixie Oil Co.'s Jenkins 1, 9-12-11, dr 5617 ft. Hazlett-Simmons Neely 2, 1-14-12, set 10-in at 200 ft. Magnolia Pet. Co.'s Logan 1, 17-10-12, blg 3195 ft. Reliance Drlg. Co.'s Jones 1, 8-11-14, sd 2815 ft. W. M. Sebastan's D. H. Sebastion 1, 11-10-13, sdtr 3405 ft. The Texas Co.'s Sample C-15, 36-13-12, sd 2551 ft; Wempl A-6, 2-12-12, co 2429 ft; Brinkerhoff B-36, 30-12-0, sd 2502 ft. Wingfield et al's Haygood 1 (formerly reported Robertson A-1) 18-10-12, dr 1800 ft.

FRANKLIN PARISH — Barbour Oil Co.'s Baker 1, 3-15-7e, sd 2884 ft. T. R. Cowell's Moore 3, 12-11-6e, set 12½-in at 113 ft.

GRANT PARISH—Holmes et al's Swope 2, 18-9-1e, lcn. L. C. Swope et al's Fee 3, plugging off bottom 1607 ft; Fee 5, 18-9-1e, dk.

LA SALLE PARISH — Elbert Pet. Co.'s Urania 5, 7-10-2e, set 10-in at 113 ft. Montague Oil Co.'s Zenoria Lbr. Co.'s 11-9-1e, set 6-in at 1471 ft. Natural Gas & Fuel Corp.'s Urania M-12, 20-10-2e, set 10-in at 101 ft. Shreveport Oil Corp.'s Morrow 1, 26-10-1e, sd 1600 ft. Wingfield et al's Gibson 2, 2-9-1e, sd 3073 ft.

MOREHOUSE PARISH — Cons. Carbon Co.'s Perry 1, 14-20-4e, lcn. Keisker et al's Bonita Lbr. Co. 1, 10-23-9e, dk. Nat. Gas Prod. Co.'s Tensas Delta 9, 27-22-4e, set 6-in at 2193 ft; Tensas Delta 10, 27-22-4e, dk. The Texas Co.'s Sivley 1, 22-20-6e, dr 3135 ft. United Carbon Co.'s Atkins 1, 26-20-5e, dk.

NATCHITOCHES PARISH—Ohio Oil Co.'s L. & A. 2, 26-13-6w, fsh 3251 ft. Tate et al's Leopole 1, 4-10-10, lcn.

OUACHITA PARISH — C. W. Frierson's Feazel 1, 17-19-4e, testing 2165 ft. J. S. Gould's Grayling Lbr. Co. 1, 11-15-2e, sd 3010 ft. Hatcher & Evans' Hatcher 6, 16-19-4e, set 10-in at 198 ft. Industrial Gas Co.'s Sullivan 2, 5-18-4e, set 6-in at 2148 ft; McGee 1, 3-18-4e, rig. Louisiana Dev. Co.'s Fee 44, 6-19-5e, testing 2175 ft; Fee 45, 20-20-5e, dk. Ouachita Nat. Gas Co.'s D'Arbonne 2-A, 34-19-3e, dr 50 ft. Peerless Co.'s Moore 3, 49-20-4e, lcn.

RICHLAND PARISH — Gulf's Marshfield 3, 30-17-6e, set 6⅝-in at 2322 ft. Helm et al's Tensas 1, 10-14-5e, sd 22 ft. Louisiana Pet. Co.'s Binion 1, 22-17-6e, sd 2474 ft. Moody & Seagraves' McCoy 1, 36-16-6e, dr 2430 ft; McCoy 2, 30-16-6e, dk; Jones 1, 15-18-7e, dr 2200 ft. Natural Gas & Fuel Corp.'s Sortor 1, 20-16-6e, arr to deepen 2367 ft; Sortor B-2, 19-16-6e, lcn. Oliver et al's Hatch 1, 2-15-5e, sd 2316 ft. Standard Drlg. Co.'s Delta H. L. Co. 1, 22-16-7e, dr 1750 ft. Tex-La. Carbon Co.'s Broughton 1,1-15-6e, dr 2891 ft. Woodley Pet. Co.'s Hemler 1, 31-18-7e, set 8-in at 1800 ft.

SABINE PARISH—Arkansas Fuel Oil Co.'s Logan A-1, 23-10-12, dr 3776 ft; Logan 10, 32-10-12, sd 3980 ft; Logan 11, 33-10-12, dk; Moore 2, 32-10-12, set 6⅝-in at 3198 ft. Emlet al's Bowman Hicks 6, 8-7-12, sd 3710 ft; Bowman Hicks 7, 11-7-14, dr 3442 ft; Mansfield H. L. Co.' 1, 15-7-14, sd 515 ft. Frazier et al's Harris 1, 29-10-12, fsh 3140 ft. Longoria et al's Burkett 1, 9-9-13, dk. Magnolia Pet. Co.'s Rembert 1, 32-10-12, wosr 3240 ft; Rembert 2, 32-10-12, set 10¾-in at 242 ft; Hall 2, 33-10-12, dr 3176 ft. Tate et al's Cook Land Co.'s 1, 23-10-11, sd 3296 ft. A. H. Tarver's Long Bell Lbr. Co. 1, 5-8-13, coring 3230 ft.

UNION PARISH—Camette et al's Tugwell 1, 21-22-1e, sd 2112 ft. Interstate Nat. Gas Co.'s Parks 1, 32-20-3e, rig; Stephenson 1, 6-21-4e, lcn. Southern Carbon Co.'s Harris 1, 20-20-4e, set 6-in at 2081 ft.

WEBSTER PARISH — Cusader Oil Prod. Co.'s Hope 18, 24-21-10, wosr 2507 ft. Magnolia Pet. Co.'s Cox 3, 23-21-10, set 6⅝-in at 4301 ft; Aarnes Cox 3, 22-21-10, dk; Marshall 4, 21-21-10, blg 2578 ft; Marshall 5, 21-21-10, set 6⅝-in at 2526 ft; Waller-Obler 1, 32-23-9, dr 2660 ft; Wise 1, 30-23-9, set 10¾-in at 421 ft; Cole 1, 27-21-10, dr 2080 ft; D. G. Cox 1, 22-21-10, set 13⅜-in at 340 ft. Ohio Oil Co.'s Holloway 4, 23-21-10, dr 3597 ft. Shreveport-El Dorado Pipe Line Co.'s Gamble 1, 33-20-8, dr 3284 ft. Woodley Pet. Co.'s Cox B-1, 23-21-10, dr 4361 ft.

WINN PARISH—Ohio Oil Co.'s Rolen 1, 9-12-1w, sd 2149 ft; Edenborne 1, 31-10-4w, fsh 525 ft; Rolen Account 1, 5-12-1w, rig. H. M. Roark's Southern Mineral Co. 1, 19-11-3w, unde reaming cas 303 ft.

WEST CARROLL PARISH—Palmer Corp.'s Pioneer Cooperage Co. 1, 16-20-10e, sw at 2710 ft. Phillips Pet. Co.'s Darnell 1, 32-20-9e, dr 2638 ft.

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
Completions		
CHEROKEE COUNTY—		
Magnolia, Summers Esta. 1, W. Brewer sur	*	4374
SABINE COUNTY—		
Humble, Temple 15, A. J. Lott sur	*	925

ANDERSON COUNTY — Brooks et al's Henbry 1, Joseph Mertz sur, dk. Cosden Oil Co.'s Douglas 1, Issack sur, dr 4540 ft. Humble's Russell 1, Nancy Cannon sur, sd 4043 ft; Spencer Clemens 2, Beason sur, dr 3446 ft.

CASS COUNTY—Mid-Kansas O. & G. Co.'s Rodgers 1, Cass County School Lands sur, dr 2600 ft.

CAMP COUNTY—J. C. Rogers' Boyd 1, R. M. Montgomery sur, rig.

CHEROKEE COUNTY—Humble O. & R. Co.'s Elliott 2, M. Windsor sur, fsh 3441 ft; Ragsdale 2, N. Johnson sur, sd 4566 ft; Ragsdale 3, N. Johnson sur, set 12½-in at 429 ft; Reynolds Mortgage Co. 2, J. Durst sur, dr 4633 ft. Panhandle Oil Co.'s Whalen 1, J. Jordan sur, sd 550 ft. Woodmanse Synd.'s Hall 2, J. Durst sur, sd 800 ft.

HENDERSON COUNTY — Cayton et al's Hoffer & Nash 1, H. Jefferson sur, sd 2910 ft.

HARRISON COUNTY — J. R. Bahan's Hickman 2, lcn not checked, set 6-in at 2754 ft. Greenwood Prod. Co.'s Latex 1, A. W. O. Hick's sur, dr 2600 ft. Clark et al's Furrh-Jones 1, R. W. Bedford sur, testing 1942 ft. C. H. Lyon's Bryson 1, T. D. Wilson sur, set 6-in at 1919 ft. Magnolia's Anderson 1, J. Womack sur, tested dry 1954 ft; Trosper 2, J. H. Harrison sur, cmtg off bottom 2862 ft; Trosper 4, J. H. Harrison sur, dk. State Line O. & G. Co.'s Issacks & Hardman 1, E. Little sur, set 10-in at 81 ft.

KAUFMAN COUNTY — Cranfield et al's Nicholson 1, A. Bennett sur, sd 3250 ft.

MARION COUNTY—William Gross' Baker 1, I. French sur, wosr 2391 ft.

NACOGDOCHES COUNTY — Stein & Lewis' Birdwell 1, Jose A. Chirino sur, sd 1100 ft. Union Sulphur Co.'s Whitermark 1, Jose A. Chirino sur, dk.

PANOLA COUNTY—Bethany O. & G. Co.'s Burns 1, W. A. Birdson sur, set 6-in at 2580 ft. Magnolia's Jernigan 1, Jane Thrope sur, dk; Baker 2, B. C. Jordan sur, testing 979 ft; Lewis 7, Jas. Johnson sur, wosr 2008 ft; S. Davenport 2, Jessee Dunlop sur, dr 1962 ft; Trosper 1, J. Shandoin sur, arr to set 6⅝-in at 1950 ft.

RUSK COUNTY—C. M. Joiner et al's Bradford 1, K. Ximines sur, dr 784 ft. Magnolia's Durren 1, Agulla Norris sur, dk. McCurrie et al's Sparks 1, Jessee Coarse sur, sd 2148 ft. Rusk Dev. Co.'s Mathews 1, D. Cortimas sur, sd 2330 ft. The Texas Co.'s Schultz 1, A. Loffton sur, dr 2425 ft.

SMITH COUNTY—Dr. Gaither's Parker 1, Don Thomas Quevedo sur, fsh 3251 ft.

SHELBY COUNTY—Magnolia's Pickering Lbr. Co. 1, Wm. J. Crane sur, dr 2805 ft. W. M. Sebastian's Pickering Lbr. Co. 1, T. F. Polly sur, sd 2830 ft.

SABINE COUNTY—Crater Oil Co.'s Mills 2, Anthony Shoals sur, sd 2000 ft. Humble's Temple 16, T. & N. O. sur, dr 804 ft.

UPSHUR COUNTY — S. W. Richardson's Newsome 1, A. Butler sur, sd 2025 ft; Minor 1, A. Lowery sur, cleaning out with cable tools 3506 ft.

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
Completions		
DAWSON COUNTY—		
R. R. Penn et al, Wright 1	*	4155
HOWARD COUNTY—		
Magnolia, Mary Chalk 6	80	1694
MITCHELL COUNTY—		
California Co., C. M. Adams 2 N-6	81	3575
NOLAN COUNTY—		
John Winemiller Corp., Booth 1	*	3213
PECOS COUNTY—		
California Co., Smith 1	12,000	1488
Marland & McMan, Yates 2	12,080	1291
Yates 4	1992	1355
Roxana, Tippett 1	4870	1400

ANDREWS COUNTY—Amon Carter-Zweifel et al's Cowden 1, elev 3136 ft, top salt 1575 ft, sd 4503 ft for orders. J. S. Cosden et al's Bedford-Ratliff 1, dr 1635 ft. Geo. Calvin & Belt's Bedford-Ratliff 1, run 12½-in cas 675 ft. Deep Rock Oil Co. et al's W. J. Harris 1, elev 3173 ft, dr by bailer 1135 ft. C. B. McKennon et al's J. S. Means 1, sd 1020 ft.

BORDEN COUNTY—Marland's McDavid 1, lcn.

BREWSTER COUNTY—Van McPhail et al's McIntyre 1, sd 1020 ft. Mid-Kansas' W. W. Turney 1, dr 475 ft. Wilcox-Anderson et al's Gage 1, sd 1000 ft. Reece & White et al's Kimball 1, lcn. Vady & Keller's Decies 1, materials on ground.

COKE COUNTY—Brown et al's Foster 1, set 8¼ cas 2210 ft, sd 2250 ft. Danciger O. & R. Co.'s Byrnn 1, run 8¼ cas 2270 ft. Lipan Oil Co.'s Conner 1, dr 1690 ft; Rawlings 1, fsh 2736 ft.

CONCHO COUNTY—The Exploration Co.'s Hartgrove 1-A, dr 470 ft.

CRANE COUNTY—Crane County Dev. Co.'s Brookfield 1, lcn. C. C. Duffey & Gault Brown's Cowden 1, rig. Gulf's Waddell 1, co 3500 ft. Marland's Cordova 1, elev 2298 ft. Top salt 825 ft, dr 1890 ft. The Texas Co. et al's Cordova 1, lcn.

CROCKETT COUNTY—Geo. H. Aanderson & Marland's University 1, elev 2666 ft, top salt 1185 ft, top lime 2142 ft, sd 2632 ft. Blackwell O. & G. Co.'s Powell 2, elev 2747 ft, top salt 1055 ft, top lime 2505 ft, fsh cas 2627 ft. J. S. Cosden et al's Paul Perener 1, rig. Corbett & Gill's University 1, run 8¼ cas 1125 ft. W. W. Donnelly-Young et al's Massie 1, dr 150 ft; Shannon 1, set 8¼ cas 1100 ft, between5 and 6 mil cu ft gas, dr 1570 ft. Epenauer et al's Noelke 1, fsh 620 ft. Gulf's Powell 2-D, top salt 1060 ft, flowed 172 bbls flu'd, 20 per cent sulphur water first 18 hours, 2607 ft; Thompson 2, cem 8¼ 547 ft. Geo. A. Henshaw & Marland's Noelke-Murphy 1, elev 2334 ft, top lime 1425 ft, dr lime 1605 ft, sulphur water in hole 1575-85 ft. James Kelly et al's Todd 1, dr 1055 ft. C .A. Jones et al's Powell 1, fsh 661 ft. McMannon Oil Co.'s Blakeney 1, dr 2585 ft. Newman Oil Co.'s Clark 1, rig. Osage Oil Co.'s Halff 1, lcn. Wm. Shaffer et al's University 2, elev 2666 ft, top salt 1060 ft, sd 2344 ft. World Oil Co.'s Shneeman 1-B, sd 800 ft; Powell 1, lcn. Van McPhail et al's Geo. Thompson 1, lcn. Van McPhail's Geo. Thompson 1, lcn.

CULBERSON COUNTY—Jas. H. Gardner et al's Radford 1, sd 585 ft.

JEFF DAVIS COUNTY—J. K. Hughes Dev. Co.'s Means 2, sd 1250 ft. Humble's C. Flores 1-A, dr 1335 ft.

ECTOR COUNTY—J. S. Cosden and The Texas Co.'s Connell 2-A, sd 3515 ft; Connell 3-A, sd 3545 ft; Connell 4-A, lcn in se cor sec 24, blk B-16.

FISHER COUNTY—Hucony Oil Co. et al's Langford 1, sd 3690 ft. Marland-Texon's J. S. McCall 1, rig. Marland & Miley Oil Co.'s Ammons 1, dr 3698 ft. Cranfill & Reynolds' J. A. Young 1, moving in materials. Sinclair's Farmer-Denise 1, sd 3119 ft. The Texas Co.'s Stephens 1, sd 2303 ft.

GAINES COUNTY—Westheimer & Daube's Forbes 1, dr 4185 ft.

GLASSCOCK COUNTY — The California Co.'s W. B. Currie 2, dr water well. Magnolia's

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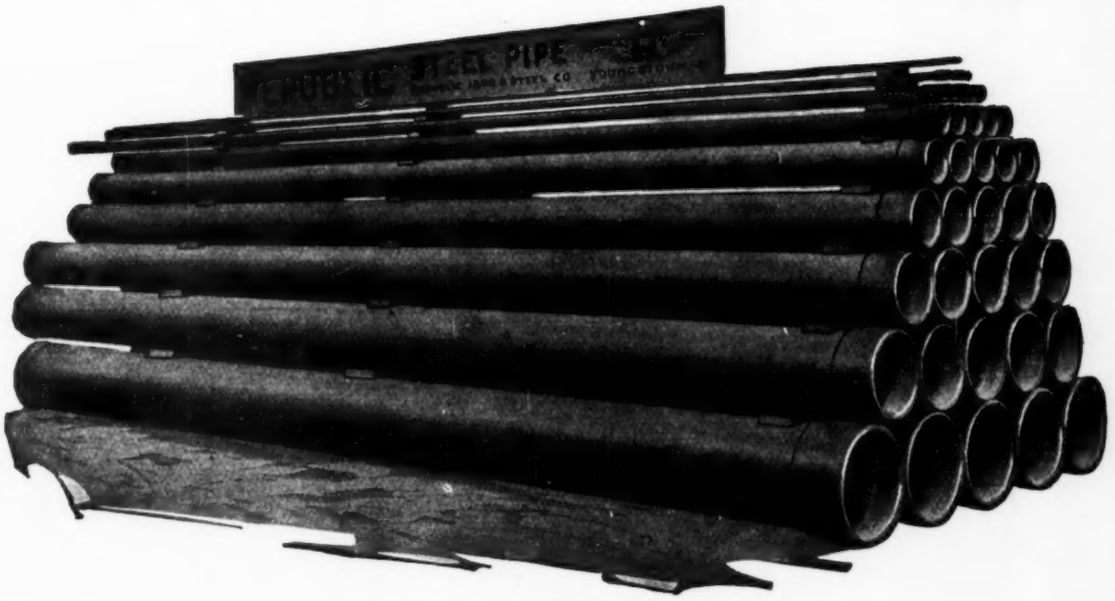

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Roberts 1, dr 2398 ft. World Oil Co. et al's McDowell 1, elev 2545 ft, top salt 1180 ft, dr 3755 ft.

TOM GREEN COUNTY—J. V. Cox et al's Llano County Fee 1, sd 306 ft. Fitzgerald & Taliaferro's Bennett 1, sd 1385 ft.

HOCKLEY COUNTY—World Oil Co.'s Ellwood 1, dr 800 ft.

HOWARD COUNTY—The California Co.'s Fisher 1, ur 10 inch cas 2034 ft, hole full sw. W. W. Donnelly & Mann-Freel's Martin 1, elev 2552 ft, top salt 960 ft, dr 3058 ft. F. H. E. Oil Co. et al's Roberts 1-B, making 2 mil ft of gas, sd 1915 ft. Geo. A. Henshaw Jr. & Co.'s Eason 1, sd 1925 ft. W. R. Settles 1, ur 10 inch cas 1465 ft, hole full of sulphur water. L. C. Harrison et al's Roberts 3, dr 1495 ft. Magnolia's Kelly-Chalk 2, dr 1575 ft; Kelly-Chalk 7, dr 1460 ft; Kelly-Chalk 8, ur 8¼ cas 940 ft; Sarah-Hyman 3, dr 765 ft; John Roberts 1, dr 2640 ft, show oil. Marland's Clay 1-E, dr 2554 ft, gray lime, swabbed 160 bbls oil; Jones 1, sd 500 ft; A. M. Fisher 1, elev 2740 ft, top lime 2950 ft, ur 6⅝ cas 3505 ft: A. G. Haynes 1, top salt 1155 ft, top lime 2860 ft, dr 3380 ft; A. Richardson 1, dr water well. Marland & Texon's Connelly 1, elev 2577 ft, set 8½ cas at 1050 ft, dr 1425 ft; Guitar 1-A, elev 2556 ft ,top salt 1215 ft, dr 2970 ft; Settles 3, dr 1285 ft. Sweeney et al's Chalk 1, swabbed 150 bbls after shot, dr 1669 ft. Vitex Oil Co.'s Clay 1, sd 1450 ft.

HUDSPETH COUNTY—Lockhart & Co.'s Moore 1, sd 100 ft; Gardner & Mosley 1, sd 262 ft.

JONES COUNTY—E. P. Campbell et al's Herndon 1, sd 3009 ft. R. F. Garland & Co.'s Glynn 1, fsh 2435 ft. Gibson-Johnson et al's Joe Dillard 1, sd 2306 ft. Hutson & Weaver's Smith 1-A, dr 875 ft. Phillips' Joe Winters 3, rig; Mason 2, spudding. Stebbins O. & G. Co. and Sinclair's Scott 1, dr 485 ft; Higgs 2, lcn. W. G. Stough et al's Willis 1, sd 1740 ft to install engine. Swensondale Oil Co.'s Canton 1, dr 2515 ft.

KENT COUNTY—Marland-Texon's N. V. Bibly 1, lcn.

KING COUNTY—Humble's Pitchfork 1, dr 1219 ft. Mid-West Exploration Co.'s Patton 1, elev 1706 ft, dr 3125 ft. Pattison et al's Patton 1, elev 1616 ft, sd 2670 ft. White Eagle O. & R. Co.'s Burnett 1, elev 1818 ft, sd 3440 ft.

LOVING COUNTY—Lockhart Bros.' Fee 1, lcn.

LYNN COUNTY—Elpo Oil Co.'s Nevels 1, dr 675 ft. Hart Oil Corp.'s Edwards B-7, sd 1400 ft; 1-A, spudded.

MITCHELL COUNTY—Thraves Oil Corp.'s C. Way 1, elev 2126 ft, top lime 2140 ft, sd 2509 ft. California Co.'s C. M. Adams 7 N-6, rig.

NOLAN COUNTY—Henry Zweifel et al's Longbotham-Neal 1, elev 2528 ft, sd 3575 ft. Reiter-Foster Oil Co.'s T. E. Arledge 1, lcn.

PECOS COUNTY—Anderson et al's McKenzie 1, elev 2928 ft, top salt 1010 ft, dr 2290 ft, sulphur water in hole; Sherbino 1, rig. Buell-Hagen et al's Batchelor 1, elev 3166 ft, sd 2820 ft; Jasper 1, elev 3307 ft, top salt 1527 ft, plugging to abn, 2902 ft. The California Co.'s Smith 2, sd 1488 ft; Yates 2, rig; Yates 3, sd 1144 ft, show oil; Yates 4, dr 1052 ft; Yates 5, cem 8¼ cas 990 ft, waiting on cement. Day Bros. & McKnights' Yates 1, dr 200 ft. T. R. Cowell's J. C. Trees 1, elev 2545 ft, top salt 2305 ft, sd 3460 ft. M. Z. Dibble et al's Bonebrake 1, sd 640 ft. Douglas Oil Co.'s Sellman 1, sd 738 ft. Bob Elmore et al's Manly Holmes 1, elev 2176 ft, top salt 335 ft, sd 2011 ft, show of oil and also sulphur water. R. F. Garland & Co.'s El Paso Fee 1, elev 3264 ft, top lime 1950 ft, dr 3080 ft, showing sulphur water. Geo. A. Henshaw & Co.'s Corder 1, lcn. Humble's Smith 1, flowing 87 bbls per hour pinched, 1425-1600 ft; Smith 2, dr 150 ft; Smith 3, rigged up; Mrs. M. A. Smith 1, moving in material. Kirby Pet. & Roxana's W. W. Turney 1, set 8¼ cas 1052 ft. Marland's Yates 2-A, spd; 3-A, dr 130 ft; 4-A, rig. Marland & McMan's Yates 3, flowing 93 bbls hourly, 1235-1358 ft; Yates 5, dr 1640 ft, flowing 30 bbls per hour; Yates 6, dr 1500 ft; Yates 7, rigging up; Yates 8, cellar; Yates 9-10, cellar. Mazda Oil Corp. & Savoy Oil Co.'s Smith 1, elev 2705 ft, top salt 800 ft, 800 ft oil in hole, dr 1500 ft; Smith 2, lcn. Mid-Kansas & Transcontinental's Smith 1, dr 1185 ft; Smith-Taylor 2, cem 6 inch cas 1153 ft, flowing 110 bbls per hour 1374 ft; Smith-Taylor 3, rigging; Yates 8-A, straight-

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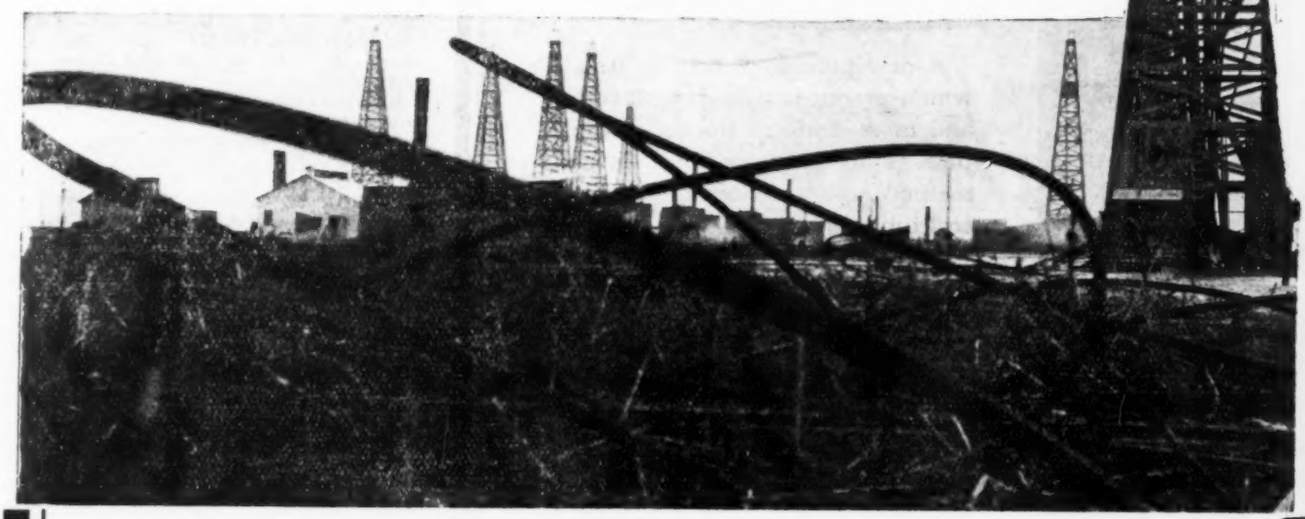

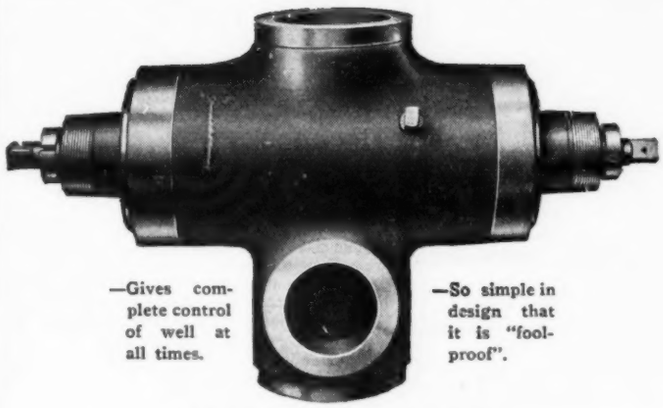

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ening crooked hole, 435 ft; Yates 9-A, rig; Yates 4-B, dr 200 ft; 5-B, dr 100 ft; 6-B, spudding; 7-B, rig up; 8-B, clearing lcn; 9-B, 10-B, 11-B, 12-B, lcns; Yates 1-D, dr 585 ft; 2-C, 3-C, 4-C, 5-C, lcns. Moody Oil Corp.'s Corder 1, lcn. Olean Pet. Co.'s G. A. Harral 1, elev 3005 ft, top salt 1135 ft, dr 1890 ft; Arthur Harral 1, lcn; Sherbino Bros. 1, lcn. Red Bank Oil Co.'s Smith 2, spudding. Roxana's Smith 1-A, sd 1562 ft, flowed 418 bbls 24 hours; Tippett 2, lcn. W. R. Shankel et al's Yates 1, sd 1479 ft. Simms Oil Co.'s Smith 2, dr 271 ft. Transcontinental's Blackstone-Slaughter 1, elev 3559 ft, dr lime 1655 ft, show 1655 ft. World Oil Co.'s Kloh 1, materials; Serf 1, lcn.

PRESIDIO COUNTY — Hadlock-Miller et al's Tootle 1, fsh 2910 ft. Pinto Canyon Oil Co.'s Fields 1, lcn.

REAGAN COUNTY—Camp & Henshaw Jr. & Co.'s University 1, sd 810 ft.

REEVES COUNTY—D. R. Thompson et al's Eddins 1, sd 1322 ft. World Oil Co.'s Duff 1-A, elev 2753 ft, top salt 1940 ft, top Delaware 4285 ft, sd 4189 ft.

RUNNELS COUNTY—Kennedy et al's J. E. Talley 1, spudding. Noble O. & G. Co.'s Simms 1, ur 8¼ cas 2720 ft. May et al's J. M. Schneider 1, fsh 2401 ft. Miles Oil Co.'s L. S. Lawhon 1, dr 1600 ft, show gas 960 ft; Chas Ray 1, cellar. Swensondale Oil Co.'s E. A. Werner 1, spd and sd. Owenwood Oil Corp.'s H. B. Fowler 1, lcn.

SCHLEICHER COUNTY—Thos. Gray-Lehman et al's Robinson 1, sd 3004 ft, hole full water.

SCURRY COUNTY—J. B. Mims et al's J. J. Koonsman 1, lcn.

STONEWALL COUNTY—Peer Oil Corp. & Producers Oil Co.'s R. P. Morrow 1, sd for 8¼ cas, 2500 ft.

TAYLOR COUNTY—A. J. Borwn Production Co.'s Henslee 1-A, elev 2010 ft, ur 8¼ cas 2237 ft. Sloan et al's Latimer 1, sd 2605 ft. Roeser-Pendleton Inc.'s Sam Butman 1, dr 2682 ft. Johnson (Gilbert) & Dyar Brothers' C. M. Brown 1, spd and sd, installing engine.

TERRELL COUNTY—W. W. Donnelly & Bend Oil Co.'s Bassett 1, lcn.

TERRY COUNTY—Kingsland Oil & Potash Co.'s Brownfield 1, dr 3280 ft.

UPTON COUNTY—J. M. Hickey et al's Gormley 1, elev 2358 ft, top salt 472 ft, plugged to abn 2195 ft. Curtis & Hults et al's Giddings 2, sd 300 ft. Wise & Jackson's Porter 1, sd 3517 ft.

VAL VERDE COUNTY—Douglas Oil Co.'s Sellars 1, sd 3500 ft. Magnolia's Whitehead 1, dr 4340 ft. O. O. Owens et al's Henry Mills 1 sd 2680 ft.

WINKLER COUNTY—Amerada's J. B. Walton 1, cem 12½ cas, wtg on cem. Atlantic's Grisham-Hunter 1, sd storage 2522 ft; Grisham-Hunter 2, cem 12½ cas 190 ft, wtg on cem; Ida Hendricks 1, dr 1970 ft; Lemar 1, dr 635 ft; Ida Hendricks 1-D, dk. Arizona Mining & Eng. Co.'s Hendricks 1, spd and sd. The California Co. & Cranfill Bros. Oil Co.'s M. J. Bashara 1, elev 2983 ft, top salt 1100 ft, fsh for cones 2807 ft. George M. Church et al's Ida Hendricks 1, dr 635 ft. Cranfill-Reynolds et al's Ida Hendricks 1, top salt, 1290 ft, top lime 2478 ft, showed 3 mil cu ft gas with tendency to increase, dr 1780 ft; Hendricks 2, top salt 1271 ft, dr 2360 ft; Grisham-Hunter 1-A, lcn. Gulf's Hendricks 2, rig; Hendricks 3, sd storage 2505 ft; Hendricks 4, rigging up to resume dr 2856 ft; Hendricks 5, sd storage 2505 ft; Hendricks 6, sd storage 2556 ft; Hendricks 7, sd storage 2520 ft. Ed. S. Hill-Ladd & Tidal's Ambrugey 1, showing sulphur water, dr 4476 ft. Humble's Grisham-Hunter 1, top salt 1480 ft, 2763 ft td, showed ½ mil ft gas 2380 ft, 5 mil at 2500 ft, 7 mil at 2763 ft, and increased to approx 15 mil tf gas, was killed to lower cas and fsh out bit, now fsh for bit; Grisham-Hunter 2, elev 2824 ft. top salt 1320 ft, top lime 2230 ft, making 20 mil ft gas 2390 ft, sd for orders 2540 ft; Grisham-Hunter 3, top salt 1362 ft, setting 8¼ cas to cem; Grisham-Hunter 4, dr 1386 ft; Grisham-Hunter 5, dk; Hendricks 1, (sec 36) top salt 2120 ft, dr 3130 ft, in lime. Independent's Grisham-Hunter 1, sd storage 2601 ft; Grisham-Hunter 2, sd for storage 2504 ft; Grisham-Hunter 1-B, dk; Hendricks 1-B (sec 44) cavey hole, sd 810 ft, lost returns. Landreth & Roxana's Grisham-Hunter 2, top salt 1830 ft, top lime 2496 ft, cem 6⅝ cas 2506 ft, sd 2428 ft; Ida Hendricks 1-A, elev 2791 ft, top salt 1395 ft, stdz 2660 ft; Ida

Hendricks 2-A, dk; 3-A, dk; Grisham-Hunter 1-D, rigging up; Grisham-Hunter 1-C, dr 1765 ft. Liner Drilling Co. et al's Campbell 1, dr 450 ft. Llano Oil Co. and Roxana's Scarborough 1, elev 2943 ft, top salt 115 ft, swabbed 70 bbls, still swabbing. R. S. Matthews et al's Cowden 1-A, sd 3501 ft; Marland's Hendricks 1, lcn; Hendricks 2, top salt 1297 ft, dr 2195 ft; Hendricks 3, top salt 1225 ft, stdz 2427 ft; Hendricks 4, rigging up. Joe Maxwell & L. C. Turman's Hendricks 1, top salt 1225 ft, dr 1380 ft; Hendricks 2, rig. Murchison-Cranfill & Marland's Grisham-Hunter 2, lcn; Grisham-Hunter 3, top salt 1265 ft, dr 2341 ft; Grisham-Hunter 4, lcn. Murchison-Cranfill et al's Grisham-Hunter 1-B, top lime 2309 ft, dr 2500 ft, 10 mil ft gas 2465 ft. Pure Oil Co.'s Grisham-Hunter 2, sd storage 2680 ft; Grisham-Hunter 3, rig; Grisham-Hunter 1-B (sec 34) elev 2827 ft, top salt 1395 ft ,top lime 2276 ft, show of oil and gas, dr 2450 ft; Grisham-Hunter 2-B, elev 2817 ft, top salt 1795 ft, top lime 2387 ft, stdz 2387 ft; Grisham-Hunter 3-B, cem 12½ 248 ft, wtg on cem; Grisham-Hunter 4-B, lcn. Republic's Grisham-Hunter 1-A (sec 45) cem 8¼ cas 2121 ft, wtg on cem; Grisham-Hunter 1-B (sec 41), elev 2823 ft, top salt 1300 ft, top lime 2125 ft, sd 2170 ft, trying to kill gas; Grisham-Hunter 2-B, rigging up. Roxana's Grisham-Hunter 1-A (sec 45) top lime 2428 ft, cem 8¼ cas 2427 ft, sd 2428 ft; Ida Hendricks 1-B (sec 29) elev 2726 ft, top salt 1330 ft, straightening hole 2682 ft; 2-B (sec 29) materials; Hendricks 1-C, dr 1345 ft; Hendricks 1-D, rigging up. Southern Crude Oil Purchasing Co.'s Grisham-Hunter 1 3-T-68-A, stdz 2313 ft; Grisham-Hunter 2, 3-T-68-A, cem 2288 ft, wtg on cem; Grisham-Hunter 3T-68-A, moving in materials; Grisham-Hunter 1, T-89-A, 10 mil ft gas 2473 to 2475 ft, dr 2555 ft; Ida Hendricks 1, 3-T-67-A, dr 2948 ft; Ida Hendricks 2, 3-T-67-A, dr 1001 ft, hole filled up, recemented 10 inch cas at 340 ft, now dr 1938 ft; Ida Hendricks 1-T-67-B, stdz 2648 ft; Ida Hendricks 4, T-67-C, sd for storage 2740 ft; Ida Hendricks 1, T-88-C, stdz 2492 ft; Ida Hendricks 2, T-88-C, dr 1770 ft; Ida Hendricks 1, T-67-F, sd 2529 ft. Texon Oil & Land Co.'s Grisham-Hunter 1-A, selling gas, 2814 ft; Grisham-Hunter 2-A, top salt 1390 ft, running 8¼ cas, 2185 ft; Grisham-Hunter 1-B (sec 45) running 10 inch cas, 850 ft; Grisham-Hunter 2-B, sd. White Eagle O. & R. Co.'s Leck-Collins 1, dr 2695 ft.

TEXAS

GULF COAST

Completion

Company, Well and Location	Initial Production Bbls.	Depth
MATAGORDA COUNTY—		
Gulf, Sanborn 3, Hawkinsville	*	5717

AUSTIN COUNTY — Humble's Rayne 1, Raccoon Bend, ru T. F. Wood's Trenckmann 1, 1½ miles w of Peters, dr 686 ft, gumbo and shale.

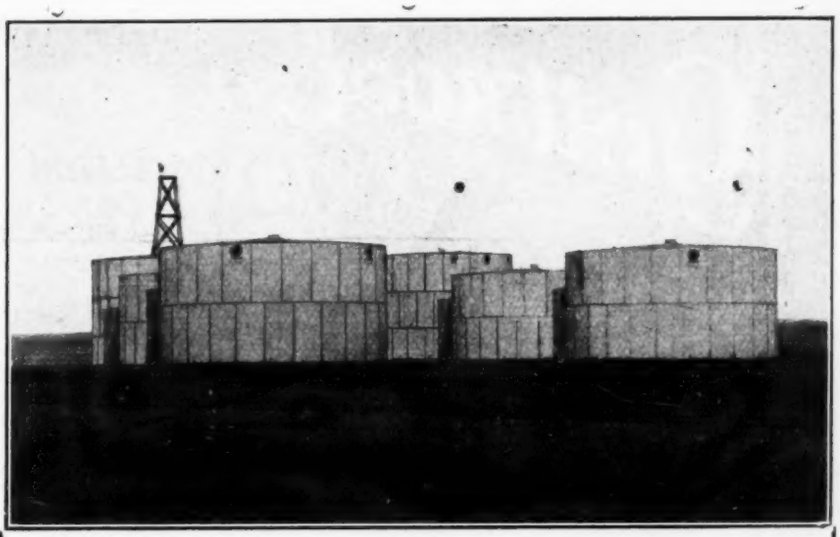
BRAZORIA COUNTY—Roxana's Allen Bernard River 1, Allen Dome, washing; Allen 4, Allen Dome, dr 5365 ft shale; Randon 1, Allen Dome, 1254 ft, fsh for bit. Danscinger Oil Co.'s Bartlett 1, 3 miles w West Columbia, lcn. Gulf's Perry 3, Stratton Ridge, dr 1552 ft gumbo and boulders.

FORT BEND COUNTY—Gulf's Trone 5, Long Point, dr 853 ft cap rock. Sun's Kasparek 1, dr 1387 ft shale. Farmer 3, Boling, plugged back to 2185 ft from 2730 ft. Gulf's Beard 1-A, Long Point, dr 3821 ft cap rock.

HARRIS COUNTY—Dr. P. S. Griffith's Fee 2, 12 mi n Houston, sd 3517 ft. Juanita Oil Co.'s Kiteman 1, 3 mi n Cypress, sd 1175 ft. Humble-Marland's Warren 2, Hockley, r. u.

JEFFERSON COUNTY—Beaumont Oil & Prospecting Co.'s Tyrell 1, 3 miles nw of Beaumont, fsh 3230 ft. J. O. Davis & Kinnear's Gladys 1, Spindle Top, fsh 5331 ft. South Spindle Top Oil & Development Co.'s Young 1, 1 mi w Nederland, prep to deepen from 1616 ft. Jim McMurry's Crosby 1, 5 mi ne Port Arthur, dr 3350 ft gumbo.

LIBERTY COUNTY — Harrison Oil Co.'s Quintette 2, N. Dayton, dr 4272 ft shale. Judge Fitwell et al's Gardner 1, 5 mi e Davis Hill, sd 3508 ft. The Texas Co.'s Harvard 1, r. u.



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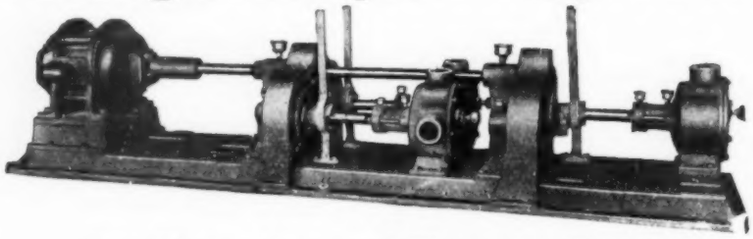

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SURVEYS
ESTIMATES OF OIL RESERVES

Barlow et al's Minchcliff 1, 2 mi ne Cleveland, sd 2184 ft.

MATAGORDA COUNTY—Gulf's Sanborn 4, Hawkinsville, lcn. Matagorda County Dv. Co.'s Hawkins 1, Bay City, sd 1985 ft shale.

MONTGOMERY COUNTY — Brain et al's Fitch A-1, 3 mi e Spring, 2790 ft shale and boulders. Cordell & Lynn's Nichols 1, w of Pinehurst 1, dr 1520 ft gumbo.

WHARTON COUNTY—Ingram Prospecting Co.'s Mensing 1, Boling, sd C. L. Nail et al's Croom 1, 1 mi e of Wharton, dr 423 ft sandy lime.

SOUTH LOUISIANA

ASCENSION PARISH—Gulf's United Lands Co. 3, Sorrento Dome, r. u.

CALCASIEU—Dr. Hintze's Beckenstein 1, Sulphur Dome, sd 4260 ft. Newton Dev. Co.'s Dupre 1, Lake Charles, sd 1823 ft. La. Land & Explo. Co.'s Calcasieu Lake 2, bldg derrick foundation.

CAMERON PARISH—Pure Oil Co.'s Sweet Lake 4, Sweet Lake, pulling liner and strainer, 5141 ft; Sweet Lake 5, Sweet Lake, sd 5129 ft. Yount-Lee's State Black Lake 5, Hackberry dome, dr 5014 ft sand and shale; n. s. Calcasieu Oil Co.'s Caldwell 2, Hackberry, dr 3742 ft sand; no show.

JEFF DAVIS PARISH—Estropal Oil Co.'s Le Doux 2, sd 2980 ft. John Carrodine et al's Walsh 1, Welsh, standing 1355 ft.

IBERIA PARISH — Calcasieu Oil Co.'s Schwing A-1, Eagle Point, dr 3797 ft rock. Gulf's State Z-3, Fausee Point, dr 715 ft sand; Brussard 1, dr 4255 ft gumbo. La. Land & Exploration Co.'s Vermillion Bay 2, bldg dk foundation.

LA FOURCHE PARISH — Gulf's Dibert-Stark-Brown, Thibodaux, hard sand 1296 ft.

ST. MARTIN'S PARISH—Rycade's Atchafalaya 1, dr 3876 ft hard sand.

TERREBONNE PARISH—Terrebonne Gas Co.'s Gaidry 1, Houma, lcn.

SOUTHWEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
SAN PATRICIO COUNTY—		
Connors Walsh, Oben 1, White Point	*	3020
Mission Drilling Co., Cage 2, White Point	¶35	2300

BROOKS COUNTY—The Texas Co.'s Lasater 3, Gyp Hill, standing 4150 ft.

CALDWELL COUNTY—Sutton & Smith's Carter 1, 4 mi ne Luling, slight show, 2636 ft; Carter 2, lcn. Radcliff et al's New 1, 7 mi ne Luling, pulled liner 2841 ft.

DUVAL COUNTY—Breen Woodward et al's Dinn 1, lcn. Schlissinger et al's Moody 2, lcn.

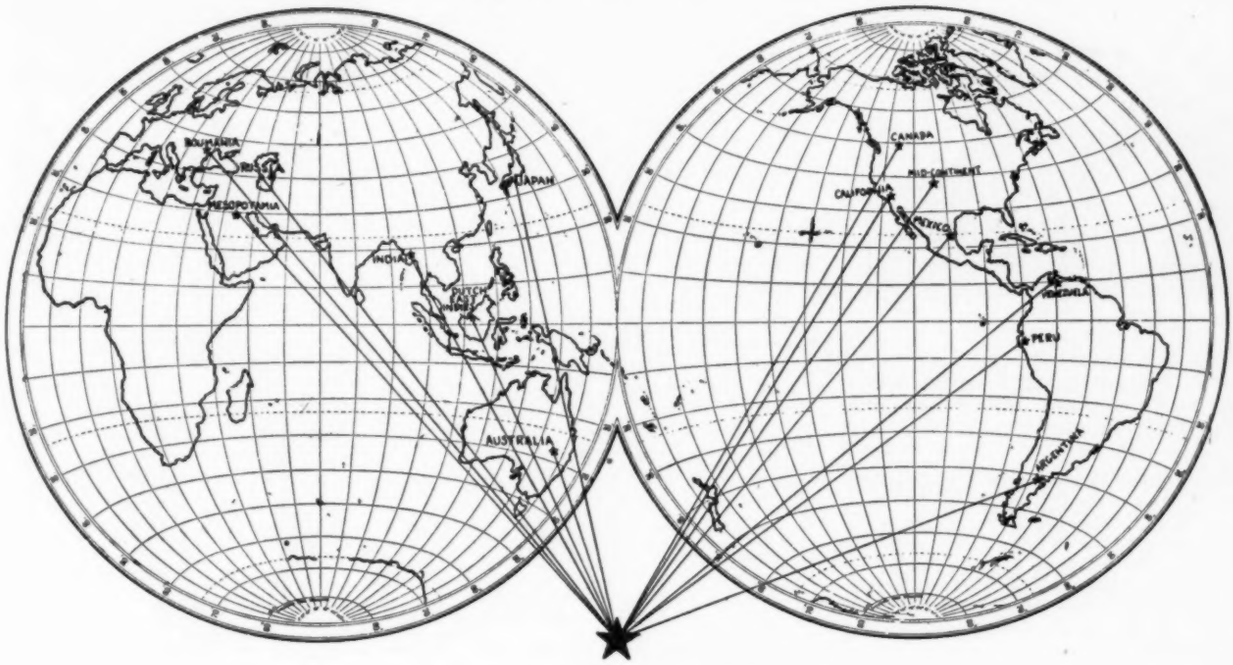
JIM HOGG COUNTY — Paesana Synd.'s Campbell 1, 8 mi se Hebbronville, testing at 1861 ft. Smi-Lock Oil Co.'s Martinez 1, dr 1700 ft shale.

MAVERICK COUNTY — Rycade's Sullivan 1, fsh 5132 ft shale; Chittam 1, sd 5630 ft; Chittam 2, dr 840 ft chalk. Ryan Consolidated's India Land Co. 1, 24 mi se Eagle Pass, stuck 2375 ft. Johnson et al's Wipff 1, sd.

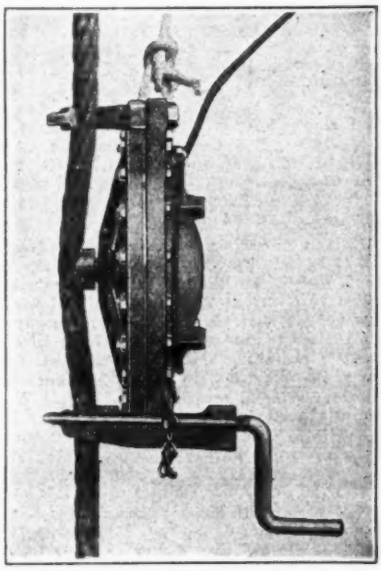
SAN PATRICIO COUNTY — Connors Walsh's Oben 1, White Point, abn 3020 ft. Mission Drilling Co.'s Harwood 1, White Point, 2165 ft; Hunter 1, lcn; Cage 2, estimated 35 million ft gas, r. p. 920 lbs; 6⅝-in cas set at 2300 ft. National Oil Co.'s Jno. McMullen sur 197 ac tr, sd 1135 ft. J. E. Garrett's Fee 1, 1 mi s Gregory dr 2300 ft sand.

VAL VERDE COUNTY — East Del Rio's Weatherbee 1, standing 3190 ft. Owens et al's Mills 1, will resume drilling at 2801 ft. Magnolia's Whitehead 1, sd 4340 ft. Thraves et al's Wilson 1, lcn. Douglas et al's Sellars 1, sd 3610 ft.

Flying "Around the World" With The Martin-Loomis Automatic Recording Weight Indicator



MARTIN - LOOMIS Automatic Recording Weight Recording Indicators are being used on rotary drilling wells in every oil field in the world today. They have given the operator a safeguard against the danger of twist-offs, a constant guide during drilling, insuring straighter hole, a check on the service from all equipment and on the log of the well, and a permanent graphic time record of all drilling operations. This service and the dependability of Martin-Loomis equipment have won for it international success.



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The Standard Boiler
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ARKANSAS

Completions

OUACHITA COUNTY—
Moody Oil Corp., Bacon 1, 12-11-8 . * 1600

UNION COUNTY—
Skelly Oil Co., Roper 8, 3-16-15 ... * 2378

ASHLEY COUNTY—Glassell et al's Keller 1, 10-19-5, dr 2948 ft.

CALHOUN COUNTY—Genther et al's Stout 1, 3-14-16, recemented 12½-in at560 ft.

COLUMBIA COUNTY — Columbia Oil Synd's Whitehead 1, 14-19-25, sd 2350 ft. Mitchell et al's Franks 1, 25-19-22, sd 150 ft. Mitchell & Isles' Bodcaw 2, 4-20-21, sd 2804 ft. Maier et al's Gantt 1, 15-17-22, dk. Scott-Phillips' Davis Lbr. Co. 2, 6-18-20, sd 2145 ft. Wingfield et al's Bodcaw 1, 4-20-21, sd 2025 ft.

DREW COUNTY—McClintock's et al's Ogle 1, 35-13-5, sd 2550 ft.

GRANT COUNTY—Jones et al's Meeks 1, 5-4-11, sd 1400 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River Lbr. Co. 2, 5-20-24, sd 2840 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 2176 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-31, sd 2941 ft.

MILLER COUNTY—E. B. Guess' M & P Bank 1, 30-15-26, arr to test 2929 ft. Lenze et al's Mann 1, 22-15-26, dr 2465 ft.

NEVADA COUNTY—Aines & Zing's Womack 1, 10-14-21, wosr 1215 ft. Burnham et al's Kinnedy 1, 9-14-21, set 4½-in at 1259 ft. Fruen et al's Rhodes 1, 22-12-21, sd 1515 ft. Humble's Fairchild 1, 6-14-20, wosr 1191 ft; Fairchild 2, 6-14-20, set 10-in at 40 ft. McDonald's et al's Pell 1, 9-15-22, set 10-in at 20 ft. J. J. O'Brien's Haynie B-3, 1-14-21, sd 1163 ft; Moss A-5, 1-14-21, set 10-in at 20 ft; Moss B-6, 1-14-21, wosr 1154 ft; Moss B-9, 1-14-21, set 10-in at 20 ft.

OUACHITA COUNTY — Buffalo Oil Co.'s Co.'s Culp 1, 22-15-19, sd 2075 ft. Brewer et al's Curry 1, 32-15-19, set 5-3/16-in at 2114 ft. F. A. Book Tr.'s Johnette 3, 33-15-16, sd 2280 ft. Copenhagen et al's Berg 3, 13-15-17, sd 2193 ft. Exchange Oil Co.'s Berg 8, 4-16-15, set 4½-in at 2589 ft. A. T. Grayson's Reynolds 1, 12-14-17, set 6-in at 1744 ft. E. M. Harrel's Tr.'s Camden C. & C. 1, 12-12-18, pulling casing 2105 ft. Magnolia Pet. Co.'s Stout B-1, 28-14-16, dr 2772 ft. Marine Oil Co.'s Hayes 5-A, 4-16-15, lcn; Snyder 14, 34-15-15, swbg 2365 ft. Owenwood Oil Corp.'s Snyder 2, 34-15-15, wosr 2292 ft. J. D. Reynolds' Chandler 1, 3-14-16, arr to abn 1900 ft. The Texas Co.'s Davidson 1, 26-15-16, dr 2587 ft.

UNION COUNTY—Brown et al's Slaughter 1, 2-17-16, sd 2296 ft. Bondurant et al's Garner 1, 8-18-12, sd 2635 ft. Booth et al's Rowland 1, 8-17-11, dr 2200 ft. Gulf's Ref. Co.'s Murphy 45, 4-16-15, dk; Hardy Murphy 43, 4-16-15, arr to set cas 2600 ft. Imperial O. & G. Co.'s Murphy 5, 9-16-15, sd 2565 ft. Goodwin 1, 26-17-16, sd 3118 ft. E. M. Jones Murphy 11, 17-16-15, set 4-in at 2519 ft. W. R. Keever's Ezell 2, 12-17-15, wosr 2172 ft; Ezell 3, 12-17-15, set 10-in at 126 ft. Keene & Wolfe's Murphy 4, 9-16-15, set 4-in at 2519 ft; Murphy 6, 9-16-15, dk. Lyall et al's Stegall 1, 11-17-15, sd 47 ft. Lion O. & R. Co.'s Hays 7, 4-16-15, wosr 2286 ft. Magna Prod. Co.'s Tatum 6, 7-16-15, dr 2410 ft. Magnolia's Crawford 3, 8-16-16, dk; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, dk; Wilson 7, 17-16-15, set 13⅜-in at 232 ft. Mountz et al's Pratt 6, 8-18-15, recmtd 6-in at 2146 ft. Murdock et al's Vestal 1, 17-16-15, sd 2561 ft. National Cons. Pet. Co.'s W. A. Fagg 1, 8-16-16, wosr 2643 ft. Natural G. & F. Corp.'s Hill B-3, 5-16-16, lcn. J. J. O'Brien's Saxon 1, 16-16-16, sd 2658 ft. Ohio Oil Co.'s Murphy 5, 9-16-15, sd 2736 ft; Crain 2, 1-17-14, arr to set 4½-in at 3013 ft; Will Pumphrey 1, 1-17-14, rig. Pitcher et al's Arkansas Timber Co. 1, 21-17-11, rig. Rovenger Oil Corp.'s Harrell 4, 15-17-16, dk. Richardson's Lawton 2, 10-16-15, fsh 2330 ft. Rice et al's Newton 1, 13-17-16, sd 2924 ft. Skelly Oil Co.'s Roper 12, 3-16-15, wosr 2375 ft. Smitherman & McDonald's Saxon A-2, 32-15-16, set 6-in at 2230. ft Sun Oil Co.'s Hays 3, 3-16-15, abn 2275 ft. Standard's Murphy 33, 4-16-15, sdtr junk 2472 ft. Wingfield et al's Greer 1, 15-19-13, sd 50 ft.

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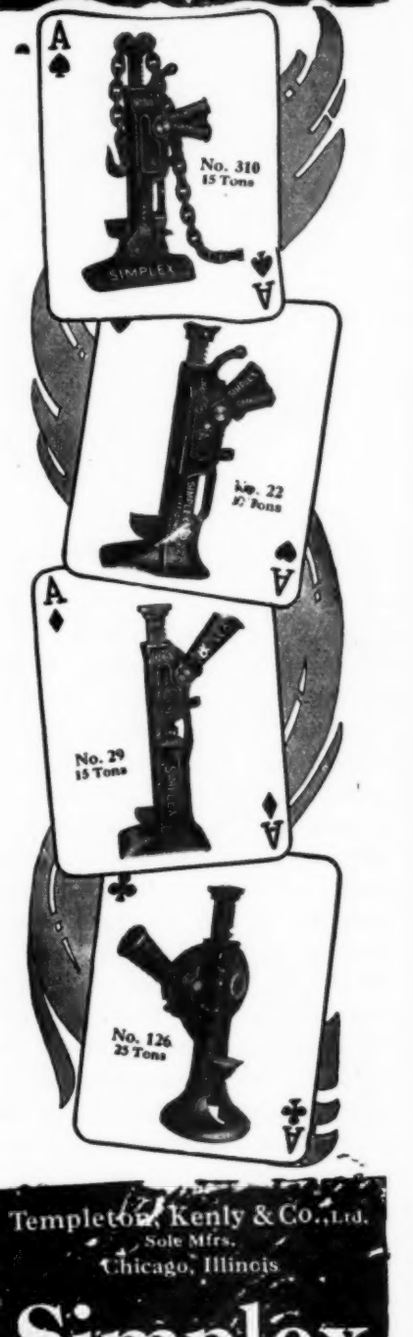

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At Your Supply House

Oxford Townsite Has 15 Producers, 10 Drilling

Tulsa.—The Oxford, Kansas, townsite field, which started development early this year following Roxana Petroleum Corporation's successful wildcat strike in the Stalnaker sand at 2050 feet in its Emrich 1, and which now leads any other single spot in Kansas in activity, is apparently destined to be a good, small producing area. There are 15 wells producing around 5200 barrels of 38 Baume gravity crude, with 12 active locations at the close of the past week.

Oxford townsite crude is coming from Stalnaker sand overlying a structural high, which contains little gas pressure. A shot of from 110 to 150 quarts of nitro is required on practically every well before it will produce, a characteristic common to the greater part of the producing spots of Kansas. Few wells in the Oxford townsite have had flowing production, and Roxana is swabbing 10 out of 11 wells, while the remaining one is being flowed by gas lift, which was recently installed for experimental purposes.

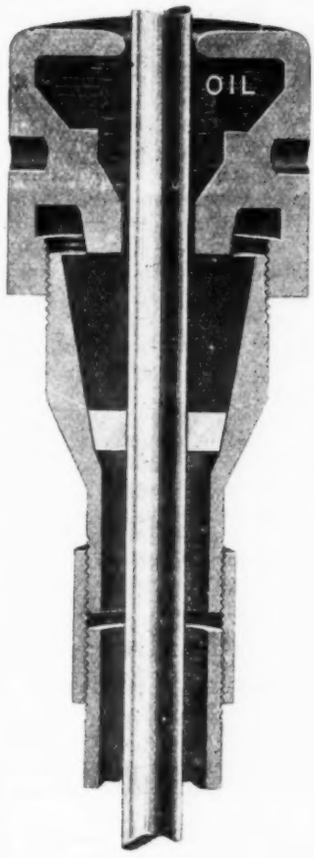
Ray Ramsey's No. 1 in Block 87, was making 410 barrels at the close of last week on the pump. La Robb Oil Company's Buffington 1, was swabbing around 600 barrels. Sharp et al's No. 1, Block 40, was pumping 40 barrels, and Jarvis and Scroggins' well was swabbing 300 barrels. C. F. Noble's No. 1, Block 33, was trying to shut off water by cementing five-inch casing at the close of the week.

Roxana's Emrich 2 was drilling at 1680 feet in shale and Emrich 3 slightly below 2000 feet October 14. C. F. Noble's No. 1, Block 32, was underreaming to set six-inch at 2098 feet at which level an oil showing was encountered early last week. The Mid-Co Oil Company's No. 1, Block 25, encountered sand at 2143 feet and at 2220 feet had 900 feet of oil in the hole with a high water content. Jesse Moore's No. 1, Block 31, has the Stalnaker at 2198 feet and set six-inch last week.

Roxana's production at Oxford is being run to the company's refinery at Arkansas City, Kansas, a distance of 25 miles, through a four-inch line of the Ozark Pipe Line Company. Derby Oil Company, one of the leading operators in the field aside from the Roxana, is moving its production and production from several of the other operators by rail from a loading rack constructed shortly after its first production was obtained there.

Drill on College Campus

Winfield, Kansas.—Permission has been granted to Roth & Faurot, independent operators, by the board of trustees of Southwestern College here to drill two more oil wells on the campus, provided agreement can be made for locations that will not mar the beauty of the campus.



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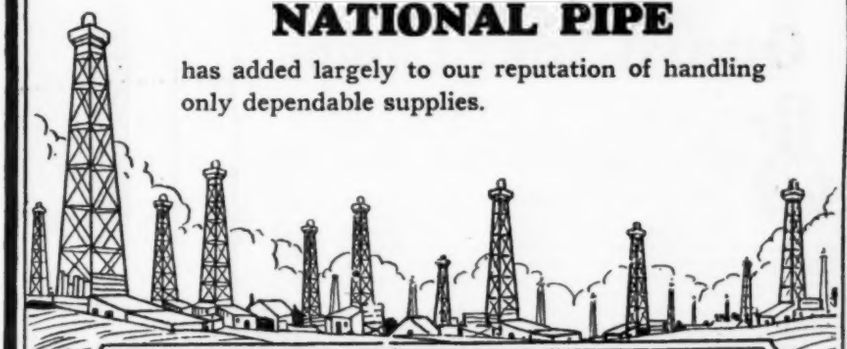

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Using equipment already on the lease, you can soon arrange a plant for treating any quantity and any variety of "cut oil" with—

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There is no heavy investment. Sufficient treating capacity for flush production does not penalize the operator at a later period.

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Tret-O-Lite

Test Is Below Deepest Production

Houston.—The Harrison Oil Company's Quintette 2 at North Dayton, Liberty County, was drilling Monday of this week at 4272 feet in shale. At that depth the hole was 137 feet deeper than the bottom of this company's Quintette 1, only deep producer in the field. The No. 2 is 300 feet east and 50 feet south of No. 1.

The Quintette 1, which was completed on July 14, 1927, for an initial flow of about 250 barrels from 4135 feet, is still flowing at nearly the same rate. During September it averaged 228 barrels a day.

This well is producing the first deep oil ever found in commercial quantity at North Dayton, and represents the first reward of 30 years of prospecting for deep production in the district. It is located about one mile south of the old shallow production at North Dayton.

Fort Worth Office of Gulf Company Moved

Fort Worth.—The Fort Worth office of the Gulf Production Company is now housed in the new Petroleum Building, occupying four complete floors.

In the new quarters the twelfth floor is given over to the executive, geological, scouting, leasing and accounting departments. Production and engineering departments are located on the eleventh floor, land and legal departments take up the thirteenth and the tenth floor is given over to the pipe line, telegraph, telephone and traffic departments.

The company was formerly located in the W. T. Waggoner Building.

R. W. McElvain, president of the Pure Oil Company, and six of his associates, were in the West Texas district recently. The party made Odessa its headquarters while visiting the surrounding fields in Ector, Crane and Winkler Counties.

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RATES
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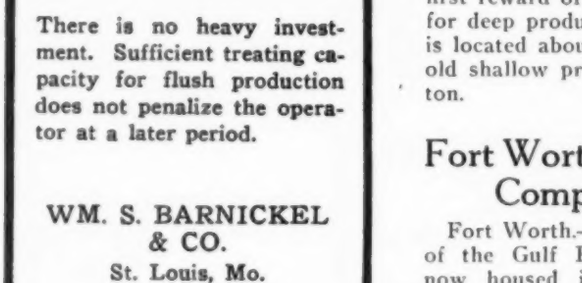

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Your loss of unguarded lamps probably averages 20% annually.

A FLEXCO-LOK Lamp Guard, costing less than a lamp, serves you for many years, prevents accidents (often serious) and breakage, stops unauthorized removal of lamps.

Reflector types eliminate hazardous home-made reflectors.

FLEXCO-LOK Guards are key locking. FLEXCO Guards close with plain screws. Both are approved by Underwriters' Laboratories, are expanded steel reinforced, bright tin finish, no heavy shadows. A complete line.

Write for sample 60-watt regular type. Give socket diameter and lamp length.

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For lamps 4" long or less. Regular and reflector types.

Reflector type for lamps 60 watt or less.

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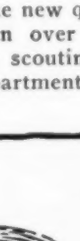
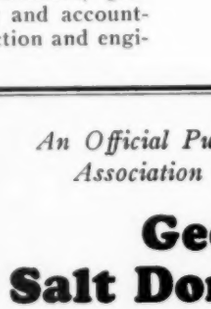


Portable type for lamps up to 4" and up to 60 watt. Regular and reflector types.

7483

An Official Publication of The American Association of Petroleum Geologists

Geology of Salt Dome Oil Fields



A Symposium on

The Origin, Structure, and General Geology of Salt Domes, With Special Reference to Oil Production and Treating Chiefly the Salt Domes of North America

Edited by
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with assistance of
Wallace E. Pratt, Donald C. Barton, Alexander Deussen, J. P. D. Hull

This book is a comprehensive picture of American Salt Domes, being a record in permanent form of the information that has accumulated during twenty years of exploration for petroleum around the salt domes of the gulf coastal plain. Written by experts who have made salt domes their specialty, both in Europe and America.

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PERMITS

(Continued from page 64.)

BURNETT COUNTY—C. D. Gold, Burnet, Warden 1, W. C. Riager sur, sw cor.

CALLAHAN COUNTY—Prairie O. & G. Co., Ranger, Baum 5, blk 5, G. M. Vigal sur, 150 ft from n and e lines. Mook-Texas Oil Co., Fort Worth, Baum B2, No. 788, G. M. Vigal sur, 150 ft from s and e lines. Brown & Co., Inc., Cisco, Edwards 3, blk 99, C. C. S. L. sur, 339 ft w of No. 1. National Ref. Co., Cleveland, Ohio, Moore 1, S 9, blk 6, S. P. Ry. sur, 420 ft from w and 150 ft from s line.

CRANE COUNTY—Pecos Oil Co., Best, University 9, S 47, blk 30, Univ. Lands sur, 660 ft s of No. 10; 8, same sur, 660 ft n of No. 7. Gulf, Fort Worth, McElroy 44, S 200, blk F, C. C. S. D. & R. G. N. G. sur, 760 ft se of No. 24; 43, same sur, 760 ft se of No. 23. Magnolia 15, blk 30, S 46, Univ. Lands sur, 660 ft s of No. 14; 14, same sur, 660 ft s of No. 6.

COOKE COUNTY—Oil Operator's Trust, Fort Worth, Bayer 1, blk 1, J. Barrett sur, 150 ft from e and 450 ft from n line. Sun Oil Co., Dallas, Hacker 6, T. Scott sur, 300 ft sw of No. 2. Continental Oil Co., Wichita Falls, Kolzer 1, blk 4, T. Scott sur, 150 ft from e and 425 ft from s line.

CALDWELL COUNTY—Texas Co., Houston, Clingsmith 4, Damon sur, 545 ft from se and 150 ft from sw line; 5, same sur, 150 ft from ne and 796 ft from se line; 6, same sur, 150 ft from ne and 495 ft from se line. Lackey 4, N. Kelly sur, 545 ft se of No. 1. Humble Oil & Ref Co., Houston, Clingsmith 4, Damon sur, 150 ft from sw and 150 ft from se line.

COLEMAN COUNTY—Senior Pet. Co., Oklahoma City, Pfluger 1, No. 280, 1650 ft from n and 4000 ft from e line. J. C. Park et al, Wichita Falls, Cannon 3, A. Wickson sur, 450 ft from n and 175 ft from w iine.

CARSON COUNTY—Panhandle Northern Oil Co., Amarillo, Holly 1, S 62, blk 2, T. T. Ry. sur, 330 ft from n and w lines.

EASTLAND COUNTY—T. J. Alworth, Ranger, Clemmer 1, Wm. Frells sur, 350 ft from n and 750 ft from e line. J. M. Gholson, Ranger, Powell 1, S. Dooley sur, 2118 ft from n and 342 ft from w line. C. H. Huddleston et al, Ranger, Fox 2, McL. C. S. L. sur, 300 ft e of No. 1.

FORT BEND COUNTY—Gulf, Houston, Wolf 5, No. 68, H. & T. C. sur, ne of No. 3.

GRAY COUNTY — Magnolia, Dallas, Heitholt 1, S 152, blk 3, I. & G. N. sur, 330 ft from n and e lines.

GUADALUPE COUNTY—J. F. Robinson, Fort Worth, Weinert 1, W. K. Estill sur, north central.

HUTCHINSON COUNTY—Ryan Cons. Pet. Corp., Bartlesville, Okla., Cockrell 1, S 2, blk Y, M. & C. sur, 330 ft from s and w lines.

HARRISON COUNTY—Tylong O. & G. Co. Inc., Giddens-Lane Bldg., Shreveport, La., Abney 2, E. Pollock sur, 1000 ft from e and 200 ft from s line. Ferguson & Laster, Waskom, Abercrombie 1, G. W. Martin sur, 165 ft from n and 300 ft from w line. J. T. Cox et al, Shreveport, La., Clark 1, J. Lipscomb sur, 125 ft from w and 150 ft from s line.

HOWARD COUNTY—Marland Oil Co., Fort Worth, Richardson 1, S 12, blk 32, T. & P. sur, center of ne quarter.

HARDIN COUNTY — Capitol Oil Co., Orange, Hodges 9, M. A. Harris sur, 155 ft n and 100 ft w of No. 8.

HUDSPETH COUNTY—Western States Oil Co., El Paso, Moore 1, S 16, blk 71, T. & P. sur, 330 ft from s and w lines.

JACK COUNTY—W. N. Baldwin, Graham, Ainsworth 1, S. M. Holderness sur, nw corner. Craig & Lowrie, Pittsburgh, Pa., Castro 2, W. M. Berryman sur, 300 ft e of No. 1. Tedspan O. & G. Co., Wichita Falls, Richards 4, blk 4, B. B. B. & C. sur, 300 ft ne of No. 2. Dale Oil Corp., Wichita Falls, Hanna 1, 3313, T. E. & L. sur, 300 ft s of center of n line.

JEFFERSON COUNTY—Yount-Lee Oil Co., Beaumont, McFaddin 46, blk 1, P. Humphreys sur, 1376 ft from e and 1237 ft from n line. Gulf, Houston, Gladys 227, J. A. Veatch sur, sw cor of blk 27.

LIMESTONE COUNTY—J. K. Hughes Dev.

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Two Tools with a Single Thought

If the fish won't come, you do not have to leave the tools in the hole for a double fishing job.

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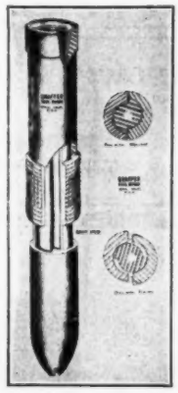

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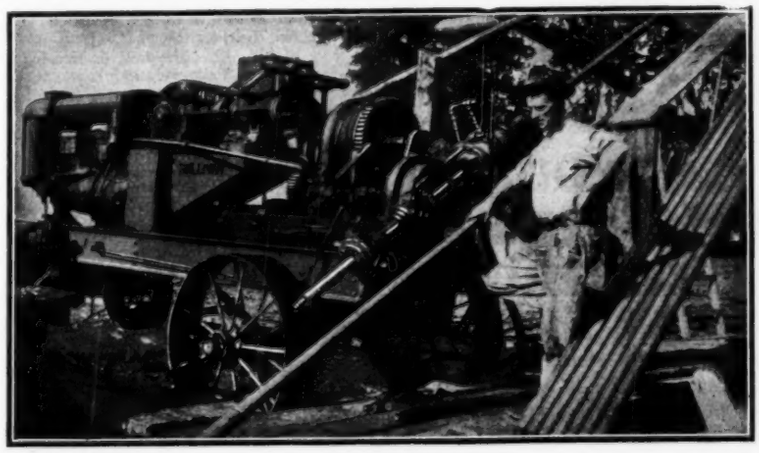

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When you need to drill holes at an angle to secure accurate structure drilling results, the only practical method is a Sullivan Diamond Drill.

Suppose you want to intercept fractures through which oil may be seeping up from lower formation. Suppose the formation pitches, or dips, so that vertical drilling will break up the strata as it passes from one to the next?

With the Diamond Drill it is easy, since this machine is designed to drill and take core at any angle of the 360 degrees.

Can you do this with any other machine?

The photograph shows a Sullivan "CN" 1000 ft. mounted, Buda engine powered, hydraulic feed, Diamond Drill boring a hole at 30 degrees from the horizontal not far from Tampico, Mexico. In this work, boring in soft shale, the machine is doing rapid and accurate work, covering a high percentage of core.

Sullivan Mounted Diamond Drills are built in two sizes. "CN" 1000 ft. capacity and "N" 2000 ft., both removing 2-inch core. The Class "N" heavy duty machine has a special automatic chuck permitting the use of a grief stem for fish tailing and utilizing mud fluid when necessary.

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Co., Mexia, Lewis 1, P. Varela sur, 100 ft from s and e lines.

LIVE OAK COUNTY—Houston Oil Co., Houston, Cartwright 21, F. Botillo sur, 2450 ft ne of No. 19.

MEDINA COUNTY—Witherspoon Oil Co., San Antonio, Nixon 1, No. 63 sur, 450 ft from n and 675 ft from e line. Chacon Oil Co., San Antonio, Jungman 1, No. 31, J. Degant sur, 950 ft from w and 600 from s line. Southern Gas Utilities, Inc., San Antonio, Wiemers 1, No. 540, M. Bieler sur, 500 ft from n and e lines.

MONTAGUE COUNTY—E. W. Skinner Oil Co., Nocona, Maddox 3, Chambliss sur, 300 ft from n and 150 ft from w line. Bridwell, Heydrick & Continental Oil Co., Wichita Falls, Brown 1, R. Graves sur, 150 ft from w and 750 ft from s line.

MATAGORDA COUNTY — Gulf, Houston, San Born 4, Kingston & Powell sur, 50 ft n of center of s line. Rycade Oil Corp., Houston, Koutze 5, blk 23, H. Parker sur, 600 ft from n and 800 ft from w line.

PECOS COUNTY — Marland, Fort Worth, Yates A2, S 60, blk 1, I. & G. N. sur, 600 ft s of center of n line; A3, same sur, 1010 ft from w and 1028 ft from n line; A4, same sur, 1028 ft from n and 330 ft from n line. McMan O. & G. Co., Tulsa, Okla., Yates 7, S 34¼, blk 194, G. C. & S. F. sur, 275 ft s of center of n line; 8, same sur, 275 ft n of center of s line.

PALO PINTO COUNTY—G. A. Clements, Ranger, Gaylor 1, S 152, blk A, T. & P. sur, 1120 ft from n and 450 ft from e line.

SHACKLEFORD COUNTY—T. M. Smart, Lueden, Hammond 1, Simms sur, 611 ft from e and 718 ft from s line.

SAN PATRICIO COUNTY—Houston Oil Co., Houston, Sun Oil Co., A2, blk 8, Roos sur, 646 ft from w and 843 ft from s line.

STEPHENS COUNTY—Dyar Bros., Ranger, Black 1, S 24, blk 2, S. P. Ry. sur, 330 ft from n and 1330 ft from w line.

WICHITA COUNTY—C. E. Birk, Iowa Park, Dutton 1, S 4, blk 17, D. C. S. L. sur, 450 ft from n and e lines. J. H. S. Bonner et al, Wichita Falls, Cole 21, J. McCool, J. A. Fisher, Wichita Falls, Burk 2, W. J. Smith sur, 150 ft from s and w lines. Madison O. & G. Co., Electra, Burnett 13, S 7, H. T. & B. sur, 300 ft e of No. 12. Mitchell & Farris, Cox & Fulton, Wichita Falls, Waggoner 1, blk 16, H. George sur, 150 ft from n and e lines. W. M. Moore, Wichita Falls, Crudup 2, S 19, blk 4, D. C. S. L. sur, 42 ft from n and 230 ft from w line. Jno. O'Neil, Wichita Falls, Kemp & Kempner 1, S 58, A. Roos sur, 470 ft from n and 150 ft from e line. Humble, Wichita Falls, Chilson 2, S 30, blk 4, D. C. S. L. sur, 450 ft from n and 1377 ft from e line.

WINKLER COUNTY — Atlantic, Dallas, Hendricks E 1, S 41 blk B5, School sur, 330 ft from s and w lines; D1, S 29, blk B5, same sur, 330 ft from s and e lines. Marland, Fort Worth, Hendricks 4, S 34, B. B. 5 sur, 330 ft from s and e lines. Church, Weekly & Fields, Odessa, Hendricks 1, S 29, blk B5, School sur, 330 ft from n and w lines. Pure, Mexia, Hendricks A 3, S 41, blk B5, School sur, 330 ft from ne and e lines; B 3, S 34, blk B5, School sur, 330 ft from s and w lines. Turman & Maxwell, Fort Worth, Hendricks 1, S 29, blk B5, 330 ft from n and e lines. Murchison Oil Co., Wichita Falls, Hendricks B1, S 35, blk B5, School sur, center.

WHARTON COUNTY—C. L. Nail, Boling, Coons & Hodges 1, R. Jones sur, ne cor. Weed-Gayle Oil Co., Beaumont, Kellar 8, S. F. Austin sur, 585 ft from ne and 755 ft from se line. Feltz 16, S. F. Austin sur, 150 ft from se and 575 ft from sw line.

WILBARGER COUNTY—Phillips Pet. Co., Bartlesville, Okla., Waggoner JJ, 7A, S 46, blk 4, H. & T. C. sur, 300 ft e of No. 6. Gulf, Fort Worth, Fluhman 1, W. A. McKinney sur, 160 ft from n and e lines.

YOUNG COUNTY—Ryan & Stastney, Graham, Calvin 1, S 2, J. W. Lord sur, 150 ft from s and w lines. Park Pet. Corp., Wichita Falls, Prideaux 6, A. Rohus sur, 300 ft s of No. 3. Gulf, Fort Worth, Lisle 5, S 37, M. Hall sur, 440 ft w of No. 3.

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